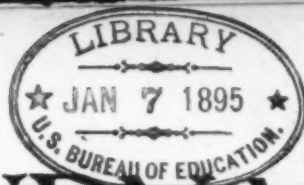


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NEW YORK AND CHICAGO.



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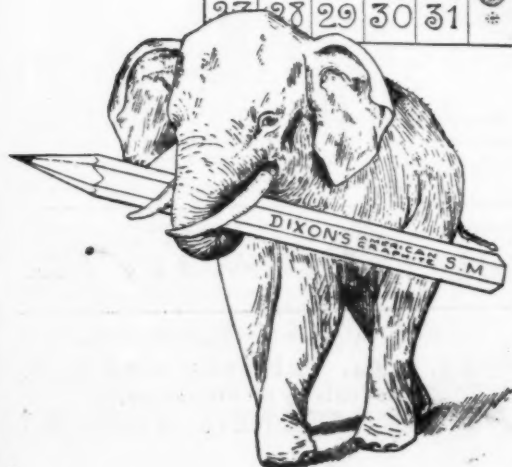
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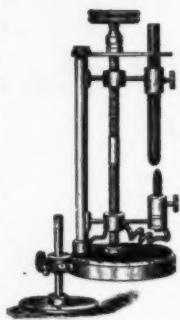
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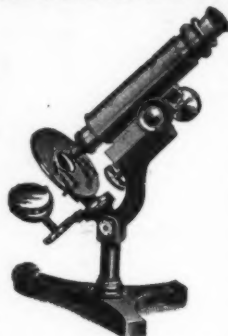
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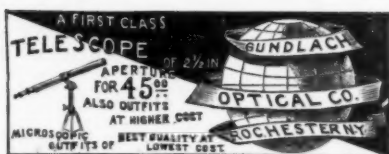
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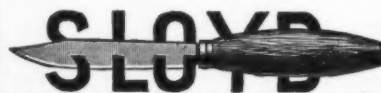
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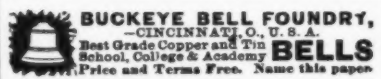


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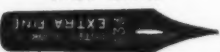
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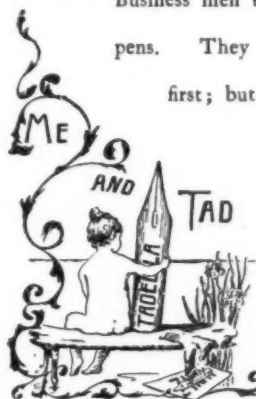
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A Weekly Journal of Education.

Vol. L.,

For the Week Ending January 5.

No. 1

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The business department of THE JOURNAL is on page 15.

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## Educational Maxims. V.

FROM THE CONCRETE TO THE ABSTRACT.

One of the principal considerations of school teachers is, and ought to be, how to obtain the best results with the least expenditure of time and effort. Perhaps there is no other point wherein all so thoroughly agree as in this one. But when we observe how they go about their work we find a wide divergence of opinions as regards economizing. A simple example will show this:

Suppose two teachers are asked to tell their classes what courage is. A. simply gives the definition and asks the children to repeat it. If his pedagogical conscience troubles him at all—providing, of course, that he has such a conscience—he will seek comfort in the thought that the children will know better by and by. He must be economical. B. tells a story of some hero and brings out that he possesses courage. This takes a little time, but then the story once told will, at least he thinks it will, impress forever what courage is. If B. hears of A.'s plan he will probably say that A. is "penny-wise," and that his own plan is more economical because it insures a sound result.

Now what are the results? A.'s pupils have a definition that to them is meaningless. The brightest wits among them may probably hold it and hearing examples of courage may test it and gradually get some inkling of its meaning. The danger to which they are exposed is that they will call everything courage that to them appears danger-defying; a cowardly suicide who is afraid to "face the music," if we may use a vulgar phrase, is a hero in their eyes, because taking one's own life to them requires great courage; a dare-devil who never reflects upon the dangers of his foolish undertakings, is also called courageous. B.'s pupils have had an illustration of courage given them and thus are sure of at least one particular instance of valor. But will they recognize courage in any other form than in the one presented? The probability is, and that means here ninety-nine times out of a hundred, they will not.

A story I heard of a pupil of David P. Page shows that even adults find it difficult to at once generalize an illustrated truth. Mr. Page held up an ear of corn before his Normal students and gave a model lesson on it, showing how to set a class of children to thinking. "That is waking up mind," he concluded. One of the students who thought this a good thing, asked, "How many minutes a week shall be given to this waking-up mind?" He evidently believed that it was necessary to hold up an ear of corn every time and go through the

performance given in the model lesson. Mr. Page at once said, "Why, every minute that is not devoted to waking up mind is a waste of valuable time," and explained to the astonished student the meaning of the pedagogical maxim in question. Mr. Page was economical; as soon as he saw he was not rightly understood, he gave a fuller explanation, cited other examples of waking-up mind, and assured himself that a logical inference was drawn.

B. in his lesson was not economical, though he used a little more judgment than A. What he ought to have done will be clearer after we have briefly considered the way in which an abstract definition is appropriated by the mind.

Abstraction proceeds according to fixed mental laws. These the teacher must know, and if he wants to be truly economical, he must allow himself to be guided by them. There is no other way of reaching the results he aims at, and what is more, there is no shorter and more direct way than that pointed out by nature in the working of the mind.

The result of an abstraction is a *concept*. The term concept will bring us on the track. It means general idea, *i. e.*, an idea which combines points or features that are common to several ideas in one. Thus we combine the individual ideas of pine, oak, elm, maple, etc., in the concept tree. Now, in order to combine essential features of individual notions, it is plain (1) that the child must first have acquired these individual notions, and (2) that he must by comparison have found common features or common grounds.

The course of abstraction is thus briefly indicated. First, the mind forms clear individual notions through observations and experience. (These notions, as their name indicates, are bound up with individual things, phenomena or experiences, and are consequently particular, *concrete*.) Second, the mind recalls ideas and compares them according to their resemblances and identities in certain essential points. Third, the mind combines the essential points that several individual ideas have in common to one general idea or concept. (The points, grounds, or features common to all individual ideas of a certain group are *abstracted*, *i. e.*, drawn from them and combined.) There is no other way known.

Hence it is a waste of time and effort to simply give to the child a general idea, a vague term or an abstract definition. It is vain also to hope that one illustration will make it clear; essential points are discovered only by comparison of different individuals of one group, and it takes at least two ideas to make a comparison possible. It is dangerous to give to the child a number of individual ideas and leave it to him to form his own concepts. All intolerance, atheism, immorality, and kindred evils are at bottom nothing but results of wrong concept-



forming. The teacher must *guide* the child in the process of abstraction and thereby prevent him from forming wrong concepts, and develop and strengthen his power of logical thinking. The dangers that lie in the way of concept forming and which the teacher must constantly look out for, have already been indicated. They are, roughly classified, twofold: (1) the mind may drag things under the roof of one concept that do not belong there (usually the result of superficial comparison); (2) it may move in too narrow limits (usually the result of an immature and therefore premature drawing of conclusions).

We may now proceed to give a brief outline of the most economical way of teaching, most economical because it follows the only safe and most direct route established by nature through the laws of mental operations. There are four things to be attended to: 1. Make sure that individual notions are fully and clearly apprehended. 2. Have the child compare the individual notions that are to be reduced to concepts, separating the essential points of agreement from non-essential peculiarities of the individuals. 3. Have the child give the result of his classification, *i. e.*, the completed concepts, definitions, or rules. 4. Have the child apply this new insight into the relation of individual notions by testing it on new grounds in order (a) to have him feel the satisfaction of having completed something, (b) to exercise the newly gained power, (c) to show him the possibility of and prepare him for, higher abstractions.

These four points ought to, should, yes we may as well say it, *must* be considered in every single lesson that aims to develop thought. The "must" is placed here by the law of economy. The period allotted to the child for education is short and every minute is valuable. Waste of time and effort in the face of this fact is not to be excused.

Now let us see how A. and B. ought to have proceeded in teaching their class the meaning of courage. Their first aim should have been to give a clear idea of any particular instance or instances of courage. To make a success of this three things would have to be done: (1) The children are told what the teacher is trying to teach them. This would excite expectation and get older ideas stirred up, that have some relation, no matter how remote, to the point in question. (2) The older ideas new to the new topic are called into consciousness to help interpret and grasp the meaning of courage. (3) A story of a striking case of courage might be told, or several examples given. After the teacher has made sure that he has been fully and correctly understood, and the matter firmly fixed in every mind, the next step is to have the children recall a number of instances of courage that have come under their observation or examples showing courage on their own part. The essential points in all these instances are then separated from non-essentials by close comparisons. This fourth step having been completed, the fifth is taken: the children are asked to give their own definitions of courage. These are summarized in one or a few statements representing the result, *i. e.*, the concept or final definition of the class and might be written on the blackboard to stand clearly before the children. In the sixth and last step then the children are asked to make applications of the definition. Compositions on courage might be written, for instance, or

examples given requiring clear cut judgments as to whether they illustrate instances of courage. The essential thing is to give the children an opportunity to apply their new knowledge, to transform it into conscious doing. For as Herbart says, "Man must be able to apply what he has learned, knowledge and ability must be put to actual use." Thereby the process of abstraction has been brought to an end.

In the maxim "from the concrete to the abstract" we thus have a rule which if strictly adhered to in the procedure of teaching will ensure the economy in time and effort that we are all aiming to observe in teaching. It is the principal rule of all instruction that proceeds in accordance with psychological laws.

## Naturalness in Teaching.

By J. S. TOMLIN.

Why should you be two-faced? Why wear one air for the world and another for the school? Is it necessary that all the genial currents of the soul should freeze, the sunshine get behind a cloud and the brightness of one's life become totally eclipsed when the school-bell rings? Why put on pedantic, lugubrious airs anyway?

Just where an exactly proper gravity should set in—I mean, just how much it should weigh—is a delicate question. It should not be estimated too highly. Stiffness favors awkwardness, pomposity is egregious ignorance, the brow of menace, heavy and ominous albeit, breeds immorality, obsequiousness is soon laid bare, while sweet silliness to lure affection has never been known to last five days. Nothing but naturalness will wear. Being the essence of good sense it never grows stale. Hundreds of teachers would better try it.

One thing let me insist upon, and that is, the school might be made interesting—intensely interesting, and full of life and activity.

To reach this result requires no artificial channel. Let the teacher be interested and all ablaze with inspiration issuing from a love of nature and nature's truth, and the "ways and means" will take care of themselves, —and so will the children's conduct. It may be necessary to diversify, then diversify, and continue forever to diversify. Learn the truth, dear young teacher, that if your school is not interested and interesting, it is a pest-house of moral and intellectual disease.

Much has been written about how to make the school interesting; and it is the supremely vital point. My advice is embodied above, be yourself, be individual, original, *Natural*.

We were reciting on ventilation the other day—a bright October forenoon—and some one naively suggested that we go out in the shade—this is Florida—to recite. We went.

And how the birds were singing, the breezes blowing, and the bright sweet light flooding the world! We ate oranges, talked of oxygen, and drank it in, while we were all as happy as the caroling birds over our heads. There is no reason why teachers should ever get old. Your sorrow comes from your mistakes; you chisel out your own crow-feet, and die of professional ennui in the atmosphere you have poisoned.

Monticello, Fla.

When I open my eyes upon a room full of people, it is not to be supposed that I have as many ideas as there are people and things in the room, and then make these into one idea by a process of patchwork. The very apperception consists simply in uniting these various elements in one whole; it does not exist until they have been united. The separation of this whole into its constituent elements is a later act. The same holds true of successive elements. When I listen to a spoken sentence I do not apperceive separately each sound, and then piece them together. I take in the idea of the whole sentence. The analytic recognition of separate elements is a later process. Psychologically, the synthesis precedes analysis.—*Dewey*.

## Value of Pedagogical Knowledge.

"Suppose you have read all those books," said a New York vice-principal to a teacher in a country village, "What good is it to you? Can you teach arithmetic or grammar any better than I can? I have heard of reading of books on pedagogy, but all there is in teaching is to set lessons and hear them; make them get their lessons as perfectly as possible. If your books will show me how I can get a boy to learn his lessons more perfectly, I'll buy and read them."

It is altogether probable that fully three-fourths of those who have considered the subject have come to the same conclusion as this woman vice-principal who had been in the school-room for upwards of twenty-five years. They believe that it is well enough to read about education if one has the time and the taste; but not to seriously believe that thereby skill in teaching will be obtained. It would surprise one to know how few of the teachers of New York, Brooklyn, and Philadelphia own a book on education, or that they read it if they own one. A case is remembered of a young woman who entered the Normal college of New York city and left it without completing her course, giving as the reason that a woman principal had secured her a place and said that "she would learn more about teaching in her school than in all the normal colleges in the world."

These and similar facts lead to the conclusion that there is a general disbelief in the value of a knowledge of the principles of education. It is stated that the superintendent of the schools of a very large city in America declared, "I don't understand education, it is not necessary that I should."

If the libraries of a good many superintendents were examined there would be noted a surprising absence of educational works. And then again how few of those who enter upon teaching are asked any questions concerning education? It is reported that once a committee of a board of education did ask their superintendent, "Who was Comenius?" and got the reply, "He was a monk."

These are exceptions. A case is remembered of a visit to a school of moderate size in the interior of New York state and on the desk among arithmetics and grammars were several works on pedagogy that showed they had received considerable use.

But the question will arise, is there a real value to the practical teacher in knowing the history, methods, principles, and civics of education? Edward Everett in a wonderfully eloquent speech in Boston at a meeting called to consider the question of erecting a monument on Bunker Hill said, "I am asked by intelligent people here in Boston, what good will a monument do?" People of that kind existed even in Boston which owes its historic glory to the blood that flowed so freely when resistance to British power seemed the most unlikely to be successful of all things. People ready to question any movement that is not mildewed (they call it "hallowed") by age still exist; the study of pedagogy is decidedly a new movement; that is sufficient in their eyes to condemn it; that it involves work out of school is probably another.

But a deeper reason is their position growing out of the low definition they give to teaching or education. This they define as (1) setting a lesson in a book (2) the learning of that verbatim by the scholar, (3) the hearing him recite it. To such persons a study of the principles of education seems a sheer waste of time. Such persons delude themselves by naming their work teaching; they are merely lesson hearers—reciting posts. It is quite probable that a machine could be invented that would hear lessons, and at every failure to say the right word cause a bell to ring—at least one of Mr. Edison's assistants so declares. All persons who are doing a merely mechanical work become so *mechanicalized* that they use no reasoning power, and hence see no cause for improving those powers.

The best thinkers declare that the mechanical age of teaching is certain to come soon to an end. In the large cities, owing to the fact that the educational sys-

tem is semi-political, a very large share of the teachers owe their positions not to their knowledge of educational principles, but to political influence. This will continue for some years to come, but it is prophesied that it will not always be so; on the contrary, that the one that knows the most of education will stand the best chance of a position. Until that day comes it is likely that most of those applying for positions, seeing that no questions are asked concerning the principles of education, will not study those principles.

Yet there are thousands that have not bowed the knee to Baal; while obliged to allow mechanics to do the work of education they know it could be done ten thousand times better by those who understand the laws of mental growth, and who are able to set the mental forces at work in a normal manner; and as the educational infidels and reciting posts die off, men and women of a different and better type take their places. It is from the operation of the beneficent law of evolution that education is to obtain its help. There are fewer repeating the words with which this article opened now than there were twenty years ago. There is slowly spreading over the country a belief that a knowledge of pedagogy is exceedingly important. But time is required. If the change that has begun goes on at the rate it has been going on, it is safe to say that in twenty years more, every teacher will be a student of pedagogy and base his methods on his knowledge and not on the practices he has seen employed, practices that smack of the medieval years.

## The Spiritual Side.

There are many who decry the influence of an enlarged scope of education, who say that the increase of free schools and colleges has not produced a perceptible increase in the general stock of knowledge or made mankind any better; that the real result has been to substitute illusive half knowledge for the unlettered simplicity that once prevailed, and awaken hopes of some easy way to wealth by means of a sort of conjuring with terms of which others are ignorant. There is no doubt that many a boy has been kept in school and made into a sort of intellectual machine of no value to himself or to the community; while certifying to the lack of judgment in the teacher the pessimistic public consider him as displaying the failure of the scheme for general education.

But there is something omitted in the calculation. Let it be conceded that the boy who is good for nothing but to use the spade or the hoe is set to read some extracts from Hamlet when he reaches the Fourth Reader, and that it is one of his tasks to learn something about Milton and Columbus, even of Raphael or Phidias, we are to remember that man is a complex being. It is possible for a man whose lot it is to handle the hoe and the spade to employ his mind meanwhile on subjects that give him content amid his toil. It is not that he has been taught too much, he has on the contrary been taught too little. The fault is that the school is an intellectual factory rather than a place of stimulation to spiritual excellence, a place for addressing the entire being.

Man is not a machine to be made to a model, but a sentient creature, a spiritual being that demands for his perfection the employment of spiritual forces. The school must address the spiritual side of the child; for life is a mission to all. Something must hallow our work and give strength and stability to the mental structure. The school may thus rightly deal with high things; nor is it any excuse that the lads before the teacher are to tread the common paths of life. Work is the lot of all; it was the command to Adam that he was to care for the garden in which he was placed. How shall man's work be hallowed? That is the problem that must stand before the teacher, not to show how work can be avoided. The man who addressed a large school of boys and urged them to study hard or they would have to work for a living was all wrong. He might have justly told them they would all have to work, but by knowledge and by



trained minds they could choose that kind which would be most appropriate, and that is about all.

In this busy on-rushing world what is it that sustains mankind? The main object put before our youth out of school is unfortunately money. Too often those who address schools speak of men who started in life with nothing and ended with a million. But if this were a great accomplishment it is in the reach of but few; labor all must, whether much or little be reached. In the battle of life it is spiritual upholding that men need; no matter in what path the boy's steps may wander, how long and severe, or how short the hours he may labor; how few the things he may own or how abundant his possessions he will need to feel that life, his life, is a mission.

This is not so stated to demand that religious forms have a place in the school. When it is seen how poorly attended the churches are it will be apparent that religious forms fail to satisfy the heart of man. It is the spiritual nature of the child that must be addressed, and it is in this that the schools fail; they aim at figures, but that is but the means to the high end of cultivating the spirit. The teacher who looks at a class become perfect in the multiplication table and finds in himself a glow of satisfaction should be startled. He is not there for that. The "little flower in the crannied wall" is there for a spiritual purpose, and so the teacher is in the school for something more than to teach addition.

If then the boy goes to the plough from his Fourth Reader that has given his imagination some glimpses of another world in an extract from the Nibelungen days let it not be counted as a loss of time; let the opportunity be welcomed and seized to impress his spiritual nature; give wings to his spirit and cause his heart to beat rhythmically to high aspirations. It is possible to impregnate him with an idea which, like the music imprisoned in the strings of an instrument and set free by the touch of the artist, may be expanded by influences of the lilies of the field and the stars in the heavens and dominate his entire life.

## The Relation of Geography to Literature and History.

(Paper by Chas. McMurry, read before the Northern Indiana Teachers' Association.)

Before trying to lay out a course of study in which these three branches are set in proper relation to each other it seems necessary to make up our minds upon two important preliminary problems:

1. What relative importance has each of these studies in contributing to the best culture of a child?
2. What natural and unforced relations subsist between these studies upon which a proper effort at harmonizing and unifying them may be based?

The first question we shall not attempt to discuss or elaborate, but content ourselves with a brief confession of faith.

1. Literature and history combined are an all-important central field of study for children. They contain the strong and efficient elements of culture in high potency. They are especially valuable for their human and humanizing quality. They deserve to hold a leading place in any scheme of education.

2. Geography is a real study of much knowledge content, which rests partly upon history and partly upon natural science. Its relations to natural science are numerous and manifold, and have been often emphasized, more so than those to history and literature. Geography is so important because it is a study of man's environment in nature.

Geography is important as a study full of thought content, and its roots, more than those of any other study, reach out among the roots of all other studies. The numerous important relations in which geography stands to other branches of knowledge much increase its importance in any plan of co-ordinating and unifying studies.

Our problem in this paper is to examine these relations between literature and history on the one side and geography on the other

We will begin with literature. Let us make a list of those literary products in our schools which have a distinct geographical complexion.

1. Robinson Crusoe has much to do with England, the Atlantic ocean, the tropics and the savages upon the islands. It has a very distinct geographical setting and environment.

2. The Greek Myths, such as Hercules, Theseus, Perseus, Jason, Ulysses, Troy, Æneas, etc., performed their wondrous deeds upon the shores and waters of the Mediterranean and its neighboring countries.

3. Siegfried, in Germany, is closely associated with the Rhine and Danube and the countries drained by these two central rivers of Europe. The Golden Legend also belongs here.

4. The story of Tell is inseparably associated with the Alps, their valleys and peaks, their herdsmen and hunters, their people and climate.

5. The Lays of Ancient Rome cluster about the city of Rome. The Tiber, the Apennines, the plains and passes, the city walls and battlefields are vividly located in central Italy.

6. English, Scotch, and other ballads are distinctly of geographical significance, as The Armada, Ye Mariners of England, Hohenlinden, Waterloo, Boadicea, and Alfred the Harper.

7. Scott's Tales of a Grandfather, Marmion, and Lady of the Lake, are full of the local features, scenery and life of Scotland and northern England. Ivanhoe and Rob Roy are descriptive of the life and surroundings of English and Scotch heroes. The castles and hills, the cities and country are pictured forth.

8. Hamlet, Macbeth, and Merchant of Venice have each a very definite local habitation and interest.

9. The Sketch Book, in its American part, is linked inseparably with the Hudson and the Catskills, while its English part deals with London, Westminster, and rural life in England.

10. The Tales of the White Hills derive their name and much of their significance from the peculiarities of the mountain regions which they commemorate and describe.

11. Miles Standish and Evangeline are very clear and striking in their graphic picturing of scenery along the New England coast, in Nova Scotia and along the lower Mississippi.

12. Hiawatha is redolent with the perfumes of forest and prairie as the Indian knew them, and enshrines in poetry the region of the Great Lakes, the Upper Mississippi and the plains to the westward.

13. Mrs. Hemans' poem and the orations of Everett and Webster at Plymouth and Bunker Hill render the spots they commemorate more sacred to patriots. Grandmother's Story of Bunker Hill, Washington Elm, Emerson's Concord Bridge, and Paul Revere's Ride are distinctly local in their geographical reminiscences and suggestions.

14. Snow Bound, Among the Hills, and The Building of the Ship are pictures from the life and scenery and industries of New England.

15. Many other choice masterpieces of literature, long and short, could be mentioned, which receive much of their charm and coloring from peculiar local geographical associations, for example, Arabian Nights, Sohrab and Rustum, A-Hunting of the Deer, Barbara Frietchie, Gray's Elegy, Enoch Arden, The Deserted Village, Tam O'Shanter, Sheridan's Ride.

There is little doubt that nearly all of the above mentioned selections from our best literature should be read by children in the grades below the high school. There is, moreover, scarcely one of them that can be understood and fully appreciated without maps, pictures and the graphic illustrative devices peculiar to geography. In other words, it is impossible to get into the full spirit of many of these best literary products without the study of local geographical details and vigorous use of the imagination in constructing such pictures.

The Lady of the Lake, read as a whole in class, is much helped by a map of this part of Scotland, locating the lochs, mountains and streams. Some of our best



editions of this poem are illustrated by photographic scenes from this locality. A vivid and clear portraiture of these places is a great help in grasping the meaning and spirit of the author. But just the same is true of Marmion and Evangeline. Children in school, even more than older people who have traveled much, need these helps to the imagination, these sense pictures.

The kind of geography that is revealed in literature is very *realistic*, it is full of individual, local coloring, it is picturesque and panoramic, such as appeals so strongly to the sense and the fancy as to make deep impressions. It is just the kind of foundation-material upon which the larger generalizations of geography are based.

If we turn, now, a moment to the plan and outline of our geographical studies in school, we shall see that they deal essentially with the same continents, oceans, mountains, rivers, forests, and plains that we find so attractive in literature. The Mississippi, Hudson, Catskills, Boston, White Mountains, Atlantic Ocean, Scotland, Edinburgh, London, the Rhine, Alps, Rome, Athens, the Nile, etc.

From this brief discussion it may be seen that right geographical study will supply a body of ideas very helpful and even necessary to the understanding of literature. It is also apparent that literature supplies a variety of graphic pictures, which give increased interest and significance to localities mentioned in regular geography. In view of these facts it is advisable to consider a closer organic relation between literature and geography, so that they may render each other more help and support. For example, should the geography of Scotland be studied the same year as *Lady of the Lake*, *Marmion*, and *Grandfather's Tales*, so that a closer dependence of one study on the other may be established? Should the *Golden Legend* be read at the same time with the study of the Rhine, not in the geography, but in the reading lesson? Should *Evangeline* be used in reading when Nova Scotia is studied in geography, or in near proximity to the same time?

This question of the relation of literature to geography becomes still more significant when we draw *history* into this network of relations to geography and literature. It has long been felt that history stands in close causal dependence upon geography. The geographical features of a country, its climate, plains, mountains, rivers, and products exercise an immense influence upon the lines of commerce, its location of cities, its possibilities for expansion and development, and even upon the march of its armies and the character of its people. There is little use trying to understand history without a study of geographical facts and conditions.

What are the chief fields of historical fact and adventure with which children of the common school should become familiar before they are ready for the high school? In our own country they should know of our pioneer explorers and settlers beside the eastern seaboard and along the great western rivers, the stories of the Colonial settlement and their growth, the Revolution, and some of the more dramatic and important phases of our history under the constitution. They must be introduced also to Columbus, Magellan, Cortez, Pizarro, Raleigh, and Drake, who discovered and explored oceans and new continents and connected Europe with the western world.

But Europe itself has much historical narrative and biography which are very appropriate and needful to our children. Alfred, Bruce, William Wallace, Cromwell, Caesar, Hermann, Boniface, Roland, Alaric, Charles Martel, Frederick the Great, Peter the Great, Elizabeth, Isabella, Luther, Richard the Lion-Hearted, etc.

The legendary and early history of England, Scotland, Germany, France, Italy, and Greece has many of the most stirring episodes and generous, noble deeds that history anywhere records, and they are the fit materials for youthful study. The Greeks at Thermopylae, Marathon, and Platea, the Scots at Bannockburn, the Dutch patriots behind the dikes, should be inspiring illustrations of patriotism and sacrifice for country. The best parts of European history belong

by birthright to our American boys and girls, and it is capable of exerting a most wholesome influence upon them during the years of the common school course. Now these historical stories, biographies, battles, and campaigns are everywhere geographically conditioned. They can be best understood by a perception of their geographical environment. The Scotch were able to cope with the English so many years because of their mountain home and spirit. So also, Tell and the Swiss against the Austrians. The Greeks, also, by their peculiar geographical position and by the spirit they developed were able to meet and vanquish the hosts of Persia.

But history is not more closely related to geography than to literature. Think only of Ulysses, of the *Iliad*, of the Lays of Ancient Rome, and of nearly all the great poems and ballads, as well as many of the best works of Shakespeare, Scott, Longfellow, and the other poets. Their themes are very largely historical, as *Marmion*, *Hamlet*, *Henry VIII.*, *Miles Standish*, etc. In geography, literature, and history, therefore we have a triumvirate of studies that are intimately linked together in a multitude of significant ways.

One of the leading questions for schoolmasters to decide is how to bring these three prominent studies into proper relations to each other so that they may strengthen each other at every step. We are now called upon to lay out a course of study in which these three branches move along together and abreast. Instead of studying the Sandwich Islands in geography at the same time with Montcalm at Quebec in history, and Gray's elegy in literature, we may, for example, read Macaulay's "*The Armada*," take the history of Raleigh and Elizabeth and compare the present commerce of England and Spain, in geography. While studying the geography of Italy in sixth or seventh grade we might take the stories of Regulus and Hannibal in history and read the Lays of Ancient Rome. We are already associating the geography lessons of the Mississippi and St. Lawrence valleys with the French explorers, as derived from Parkman, and the poem of Hiawatha, in reading lessons.

Heretofore, in laying out courses of study, each branch of knowledge has been surveyed and worked out through the grade on an independent line, with little, if any, reference to parallel stages in other branches of learning. Geography, for instance, has usually taken a definite course through the United States, South America, Europe, and Asia, without inquiring whether history and literature were helped or hindered by such a course, and without caring whether geography itself needed the companionship and help of history and literature.

We are now waking up to the fact that there never was any history without geography in the real world, that literature is only a phase of history and the avenue of its best expression, that if geography were extracted from literature much of the latter would be extremely flat, that in fact these three studies are much like the three legs of a stool; without any one of them the other two are of little service.

When traced back into their origin in actual conditions in the natural world, geography, history, and literature are found to be astonishingly intimate and close in their mutual relations and dependencies. To appreciate and understand the facts of any one it is necessary to have the others in mind, because of their causal and local relations. These three subjects, therefore, considered as external sciences are very much of a unit. But even if this were not so, the mind of a child, whose sanity and health depends upon the feeling of individual, personal identity, must unify in one little ego (personal consciousness) the whole varied realm of knowledge. All items of knowledge and experience converge, like the spokes of a wheel, toward this central ego. The ego seeks to gain a mastery of the varied realm of experience, first by binding every new fact or perception close to its conscious self, and secondly by discovering and fixing relations between its perceptions or knowledge of external things so as to have an easy access to every part. It is, therefore, the function of the soul to acquire and unify knowledge.

## The Study of Minerals.

By WILBUR S. JACKMAN.

INORGANIC RELATIONS.										ORGANIC RELATIONS.											
ORIGIN.					DISINTEGRATION.					PLANTS					ANIMALS.						
ELEMENTS.		ROCK FORMATION.			SOILS.			PHYSICAL AND CHEMICAL.				PLANTS					ANIMALS.				
Non Metal-lic, Acidic	Metallic or Basic	Aqueous	Igneous	Organic	Texture	Color	Fertility	Transportation	Contour of Surface	Landscape											
Oxygen	Alumi-num	Chemical Solution	Fusion	Plants	Internal Form	Streak	Chemical Comp'sit'n	Internal Form	Order of Strata	Color	Solubility	Chemical Comp'sit'n	Tenacity	Distribution	Hardness	Luster	Distribu-tion	Quantity	History		
Silicon	Magne-sium	Solution	Pressure	Animals	Hardness	Luster	Solubility	Gravity	Hardness	Streak	Chemical Comp'sit'n	Hardness	Hardness	Chemical Comp'sit'n	Solubility	Color	Quantity	Distribu-tion			
Carbon	Calcium	External Form	Metamor-phism	Land	Tenacity	Diaphane-ty	Internal Form	Chemical Comp'sit'n	Internal Form	Luster	Internal Form	Hardness	Chemical Comp'sit'n	Internal Form	Gravity	Streak	Chemical Comp'sit'n	Chemical Compo-sit'n			
Sulphur	Iron	Internal Form	External Form	Water	Gravity	Chemical Comp'sit'n	Hardness			Diaphane-ty	Hardness	Internal Form	Luster	External Form	Luster	Hardness	Fusibil-ity	Hardness			
Chlorine	Sodium		Internal Form	External Form			Gravity					External Form	Color	Luster	Color	Internal Form	Solubility	Tenacity			
Phospho-rus	Potas-sium			Internal Form								Color	Diaphane-ty	Color	Streak	External Form	Hardness	Solubility			
Fluorine	Hydro-gen											Streak	Fusibil-ity	Diaphane-ty	Internal Form	Solubility	Tenacity	Fusibil-ity			
												Diaphane-ty	Solubility	Solubility	External Form	Fusibil-ity					
												Tenacity	Internal Form	Fusibil-ity	Diaphane-ty	Tenacity					
												Fusibil-ity	External Form	Streak	Tenacity	Diaphane-ty					
												Solubility	Streak	Gravity		Magnet-ism					
												Magnet-ism	Gravity	Tenacity		Gravity					
												Gravity	Magnet-ism	Hardness							

To study a mineral is to endeavor to determine its correlations through an investigation of its properties. A property of a mineral indicates one or more relations, though it does not follow that a well marked property always indicates a correspondingly important relation.

In hematite, for example, color is a conspicuous property, but the color relations of the mineral are comparatively insignificant. It is sometimes true, too, that several properties of a mineral may combine to determine one relation; as, for example, luster, color, and hardness often give value to a mineral from the standpoint of art or manufacturing. It is only as the various relations of the mineral are seen to be derived directly from its properties that it can be said to be *known* by the student. To investigate the properties merely for

the purpose of finding the name with the aid of a "key" is to totally subvert the aim of the study.

A mineral may be considered as having two sets of relations: one set looking towards its origin, involving its history; and another looking towards its disintegration, involving its destiny. Of the sixty-eight or sixty-nine elements known to chemists, fourteen make up nearly the whole of the earth's crust. Ordinarily the pupils may be held chiefly to the study of the minerals which contain as compounds but nine or ten of these—silicon, carbon, sulphur, phosphorus, alumina, magnesium, calcium, iron, sodium, and potassium. Their compounds are classed as (1) *oxides*, as, for example, quartz and iron ore; (2) *silicates*, or compounds of silica and soda, lime, etc.; and (3) *carbonates*, compounds of car-

bonic acid and alkalis. The sulphur compounds are sulphides, as in galena or lead sulphide, and sulphates, as, for example, in gypsum or calcium sulphate. Phosphorus compounds appear as phosphates, as in apatite, or calcium phosphate.

In the process of disintegration, the agents to be kept in mind are *oxygen* found free in the atmosphere and doing its work through the formation of various compounds by a process called oxidation; *water* as the great *solvent* and sometimes by its presence or absence (hydration) determining the character of the mineral; as, for example, when limonite loses water it is changed to hematite; *carbonic acid* in the air and dissolved in the water; *decaying organisms* as a source of acids which attack the rocks.

Parallel with the processes of disintegration there are also those of mineral organization, chiefly through the agency of plant and animal life. As a result there are being formed, constantly, compounds of lime, carbon, and less considerable amounts of silicious and metalliferous deposits. In the accompanying table the aim has been to group under the chief relations of minerals the leading properties upon which those relations depend. As the pupil discovers a property he should try to determine the relation indicated by it. The importance of the relation may be modified by subsequent properties discovered, and thus the relation of the mineral as a whole will stand as a resultant of many different relations.

As works of reference in this connection, the following will be found very valuable for making laboratory tests: Crosby's Tables for the Determination of Common Minerals (D. C. Heath & Co.); Dana's Manual of Mineralogy, to be read by both pupil and teacher. Common Minerals and Rocks (D. C. Heath & Co.); Mineral Resources of the U. S. (Gov. Reports); Geology of Wisconsin (State Report); Applied Geology, S. G. Williams (D. Appleton & Co.) is a very valuable book. First Lessons on Minerals, Ellen H. Richards (Heath & Co.) is a small pamphlet that will be found useful in showing how to begin with children.

#### A SYNOPSIS OF TESTS TO AID IN THE INVESTIGATION OF THE PROPERTIES OF MINERALS.

This table has been compiled from various sources for the sake of convenience in class-room work. A manual such as Crosby's or Dana's should also be used by the pupil.

#### I. MATERIALS AND APPARATUS.

**A. Physical Tests.**—Small balances with weights to one centigram. A beaker or tumbler. A flat file. Glass with ground and plain surfaces. A small pair of pliers for breaking off fragments. A small mortar and pestle; many minerals can be powdered by grinding up a fragment between two pieces of glass.

**B. Chemical Tests.**—Bunsen Burner, alcohol lamp or large candle. Blowpipe. Piece of charcoal two or three inches square and of same thickness. Three inches platinum wire. No. 27 fused in a small glass tube for handle. Steel (or better, platinum-tipped) forceps. About 2 oz. each of carbonate of soda, borax, salt of phosphorus, cobalt solution, and hydrochloric acid. Open and closed glass tubes 3 in. long,  $\frac{1}{4}$  in. diameter. One or two test-tubes. A few strips of red and blue litmus paper.

#### II. PHYSICAL PROPERTIES.

##### A. Structure.

1. Cleavage. (a) Perfect. (b) Imperfect.
2. Fracture. (a) Conchoidal—breaking with concavities; shell-like surfaces. (b) Even, smooth. (c) Uneven. (d) Hackly. (e) Splintery.

##### B. Form.

- |              |  |
|--------------|--|
| 1. External. | Botryoidal—Surface grape-like.                                 |
|              | Mammillary—Same, but larger.                                   |
|              | Tufaceous—Porous, mineral incrustations formed from solutions. |
|              | Concretionary—Rounded masses.                                  |
|              | Geode—Hollow concretion.                                       |
|              | Stalactitic—Hanging from under surface of a rock, cone-shaped. |
|              | Stalagmitic—Formed on floors of caverns from dripping water.   |
|              | Stratified—Deposited in layers.                                |
|              | Granular, coarse or fine—Small crystals.                       |
|              | Compact—Crystals invisible to unaided eye.                     |
| 2. Internal. | Crystalline.   |
|              | Foliated—In layers.  |
|              | Fibrous—Thread-like.   |
|              | Columnar—Stout, fibrous.                                       |
|              | Amorphous—Without crystallization.                             |

##### C. Scale of Hardness.

1. Talc, } *Very Soft*; can be scratched with finger nail, or
2. Gypsum, } very easily with a knife.
3. Calcite, } *Soft*; cannot be scratched with finger nail, but
4. Fluorite, } easily scratched with a knife.

5. Apatite, } *Hard*; not easily scratched with a knife
6. Orthoclase, } scratches glass.
7. Quartz, } *Very Hard*; } Cannot be scratched with a knife,
8. Topaz, } scratches glass.
9. Corundum, } *Adamantine*; } Scratches quartz.
10. Diamond, } and itself.
- Not scratched by any other mineral.

##### D. Specific Gravity.

1. Weigh in air.
2. Weigh in water.
3. Specific gravity = weight in air ÷ loss of weight in water.

##### E. Tenacity.

1. Brittle—Breaks easily.
2. Malleable—Flattens into thin sheets under hammer.
3. Sectile—May be cut into thin slices.
4. Flexible—Retains its form when bent.
5. Elastic—Comes back to original form when bent.

##### F. Luster.

1. *Metallic*, as in metals.
  - Vitrious, as in glass.
  - Pearly, as in pearl and mica.
  - Resinous, as in sulphur, sphalerite, resins.
2. *Non-Metallic*.
  - Pitchy, as in cannel coal.
  - Silky or satiny, as in satin spar.
  - Greasy or waxy, as in serpentine.
  - Dull, as in chalk.

##### G. Streak.

Color obtained by rubbing the mineral over the surface of a piece of ground glass or over a file.

##### H. Diaphaneity

1. Transparent. Semi-transparent.
2. Translucent. Sub translucent.
3. Opaque.

#### III. CHEMICAL PROPERTIES.

##### A. Solubility. (Soluble or insoluble).

1. In water, touch to tip of tongue.
2. In acid, (dilute and concentrated, cold and hot). Dissolves, (a) With effervescence. (b) Without effervescence. (c) Gelatinizes.

NOTE.—Sulphuric and nitric acids may be needed.

##### B. Fusibility. (Fusible or Infusible).

1. NOTE.—B. B. = before blowpipe. O. F. = oxidizing (outer) flame. R. F. = reducing (inner) flame.

(a) Hold small splinter of mineral in forceps in both O. F. and R. F.

(b) Same B. B. (c) Same with *infusible* minerals, moistened with cobalt solution; alumina turns *blue*; zinc oxide, *green*; magnesia, *flesh red*.

2. *Heat mineral* (powdered, generally) *on charcoal without soda*. Use both O. F. and R. F.

(a) Note fusibility; decrepitation; intumescence; odors; coating around mineral on charcoal.

(b) Test heated product for magnetism.

(c) Powder heated product on silver coin, and moisten; dark stain indicates sulphur.

(d) Moisten heated product and test with litmus paper.

3. *Heat mineral* (powdered) *on charcoal with soda*.

(a) Repeat observations under (2) coatings; zinc, *yellow* when hot, *white* when cold; silver, *brown*; lead, *yellow*.

(b) Note of metallic globule is found.

4. *Heating in Borax or Salt of Phosphorus Bead*.

(a) Note color of bead, hot and cold. Colors: copper, *green*; iron, *yellow or brown*. Manganese, *amethyst*; silica, *effervesces* in soda, leaves *skeleton* in phosphorus.

(b) Flame colors wherever noticed indicate elements as follows: soda, *yellow*; potash, *violet*; lime, *orange*; lithia, *purplish red*; strontia, *red*; baryta, *yellowish green*; copper, *green*; chloride of copper, *blue*; phosphates, *bluish green*.

5. *Heat powdered mineral in closed tube*.

(a) Note fusibility; sublimation; condensation of vapor in upper end of tube.

(b) Test vapor and water with litmus paper.

6. *Heat powdered mineral in open tube*.

(a) Note odors; sublimation.

(b) Test with litmus paper.



## The First Year With Number. II.

By ELLEN E. KENYON.

Four has been measured during the first month by three, by two and by one to the extent of four facts in each table of relations. Three facts in each table remain to be taught. They answer questions in multiplication, division, and partition. The seven queries to be put in comparing 4 with three are:

- Three and what number make four?
- Four less three equals what number?
- Three taken how many times makes four?
- Four contains three how many times?
- Three is what part of four?
- Four is how many more than three?
- Three is how many less than four?

Eventually, the pupils will construct the tables in query form and then experiment and substitute answers for questions, thus:

$$\begin{aligned} 3 + ? &= 4 \\ 4 - 3 &= ? \\ 3 \times ? &= 4 \\ 4 \div 3 &= ? \\ 3 &= ? \text{ of } 4 \\ 4 &= ? \text{ more than } 3 \\ 3 &= ? \text{ less than } 4. \end{aligned}$$

When the child is able to do this, which will not be before the fifth or sixth month he will have become an original investigator, and to use a common expression, "The back of arithmetic will be broken." Meantime, these tables furnish a guide for the teacher, containing, as they do, all numerical facts within the compass of the number studied.

The third, fourth, and fifth questions cannot in all cases be answered until a good deal of work has been done in partition: The easy way of teaching partition is by taking it for granted there is nothing hard about it. "Give me half of your beads." "Give me both halves." "Make three rings on your slate and put one-third of your tooth-picks in each." (A tooth-pick remains and has to be broken into thirds.) "Lay one-fourth of your shells in each corner of your slate." "How many fourths?" "How many thirds?" "How many halves?" "How many counters in each half if you have four counters?"

Let paper circles represent pies and be cut (creased and torn) into halves, thirds, and fourths. (To facilitate the division into thirds, cut on one of the radii.) Let strips of paper and lines, squares etc., on the blackboard be divided into halves, thirds, and fourths. Triangular as well as oblong halves of squares and oblongs should be taken. Let real apples be cut and their parts named. Let indefinite numbers be divided into halves, thirds, and fourths. "We are going to find fourths of our tooth-picks this time." "How many fourths are there?" "How many places must we have to put them in?" (Put one in each place first and then go round again and so on till the number is exhausted.)

Don't be alarmed if your pupils betray an irregular knowledge of numbers beyond the one they are definitely examining for its precise relations to preceding numbers. The fact that one-third of six is two may develop itself while you are still working upon five. Partition will not be well understood until the number twelve can be dealt with. As soon as you find that the children know when they have twelve counters, the questions, "What is one-half of 12?" "One-third?" "One-sixth?" "Three-fourths?" etc., may be boldly asked, though the number under regular study be five. This, however, will not be likely to occur during the second month. Make haste slowly.

Without waiting for the exercises in partition to develop ability to deal with questions 3, 4, and 5 in each table, proceed to examine five.

1. Present the number and ask its name.
2. Compare it with the number last taught developing the facts.

$$\begin{aligned} 4 + 1 &= 5 \\ 5 - 4 &= 1 \\ 5 &= 1 \text{ more than } 4 \\ 4 &= 1 \text{ less than } 5 \end{aligned}$$

3. Compare it with the number three in the same way and subsequently with two and one.

4. Let each statement be applied in concrete examples, the pupils now learning to make their own. "Think of yellow birds and make a story for  $4 + 1 = 5$ ." "Think of horses and make a story for  $5 - 4 = 1$ ." "What is your story to be about this time? Make one for  $5 = 1$  more than 4." "What is your story to be about this time? Make one for  $4 = 1$  less than 5." etc.

5. Let a good deal of the busy work be the preparation of drawings to illustrate these "stories," with the numerical statements written underneath.

Much of this drawing should be done at the blackboard. It is educative in the highest degree psychologically and may conduce to good habits of art expression on the physical side, too, if a free posture and a broad sweep of the arm in drawing are made possible. The bane of the primary course nearly everywhere is too much seat work.

This work of illustration is attractive to the children and cor-

rects false concepts as well as aiding wonderfully in the development of correct ones. A little boy of six had drawn upon the blackboard a tree, four birds upon its branches and two birds flying toward it. A visitor asked him to explain the picture. He said, "There were six birds in a tree. Two flew away—" here he stopped, erased the two birds on the wing, drew two flying in the opposite direction and then continued, "and then there were four, because six less two is four." The thoughtful teacher will get from this incident an inkling of the very great value of conceptual drawing, especially in realizing to the pupil such a subject as arithmetic.

Other busy work may include exercises with inch, two-inch, three-inch, etc., sticks. The kindergarten supply stores furnish these. Measuring the longer stick by the inch affords many little operations in number, besides fixing the inch length in the mind as a unit of measurement. The inch stick may be used also to measure around and across squares, circles, etc., and objects studied. A supply of waste worsteds should be obtained from the children or some knitting factory. These can be measured and cut or broken into given lengths. Then they can be used by the youngest to string and tie up given numbers of shoe-buttons, etc. The foot-rule should be used at the blackboard and yard lengths measured off by it. Later, the question, "How many inches in a foot?" may be solved by experiment.

The gill, pint, and quart measures should be among the objects studied during this month. Sawdust or sand and real water, as well, should be measured by the children. Pupils should be practiced in naming each measure as it is held up. This practice should be game-like and full of zest. Don't require young children to remember more than they do spontaneously. Make it a sin to "miss" and you rob study of all its attraction and turn it into the weary drive that has spoiled the lives and stultified the minds of countless generations of children. The aim should be to provide a large and indefinite amount of observation and to stimulate a small and definite amount of recalling, keeping in mind that the memory depends on two conditions of presentation: 1, *vividness* of impressions; 2, *number* of like impressions. Bearing in mind also that the same fact, when encountered in a variety of forms, is more secure of a permanent place in the mind than when drilled upon always in the same guise or as a plain, bald statement, becoming more and more meaningless with every repetition.

Numbering the parts of objects studied in the "observation lessons" with the little examples in addition and subtraction that may advantageously be made in this connection, remains a part of "coördinated" arithmetic. The study of form is full of number study. In a lesson on the cube, the teacher, having developed the six-sidedness of the form required the children to tap the six opposite sides of the clay balls they were to fashion into cubes each six times upon the desks, thus emphasizing the idea six in connection with the flat sides while producing the flatness. The story of the three bears is full of number questions, if the teacher has tact to ask them without spoiling the story.

Little imaginative exercises like the following make a variety, the material being and indefinite number of tooth-picks at the back of the desks, which come into the field of study as indicated: "Let four rabbits creep into your garden. Catch three of them. Let the other run away. Tell the story." The child tells: "There were some rabbits in the woods. Four ran into my garden. I caught three and one ran back to the woods. Four less three is one." In this manner the teacher may call out illustrations of all the number facts in the day's regular lesson.

Another little game which the dullest pupils enjoy and which has been found very helpful in bringing them up to a level with brighter groups is the following: "The teacher seats herself upon one of the front desks, with a box of counters in her lap, under her apron, and gathers the dull group about her. With an air of mystery, she puts both hands into the box and says, "I take two. I take one more. How many?" The children guess and she withdraws her hands from cover and shows the number. "I take two. I take two again. How many?" "I take four. I drop three. How many?" etc., etc., etc.

It will be well to quicken up the dull group by exercises developing spryness. The questions given should be those that can be answered immediately and the game should be to see who can speak the answer first. It may be made an excellent training in voice control, the rigid requirement being to speak in low tones, though quickly. For an occasional variety, shouting in whispers may be allowed. One exercise may be to name single groups of beads moved upon the numeral frame as "Three!" "Two!" "One!" "Five!" "None!" "Four!" At another time, two groups may be quickly moved and quickly named, as, "Four and one!" "Two and three!" etc. Easy combinations may follow, with answers like, "Two and two; four!" etc. Afterward only the sum of the groups may be given. Then a group may be moved out and a part moved back, resulting in "Four less one; three!" etc.

To assist in the development of number language and especially in its free use by foreigners, such exercises as the following may be given and the answers returned in concert:

Play the blocks are rabbits. Catch two. Catch two more. How many times did you catch two? "We caught two twice." Two caught twice makes how many? "Two caught twice makes four."

Two rabbits and two rabbits are how many rabbits? "Two rabbits and two rabbits are four rabbits."

Two twos equal how many? "Two twos equal four."

Let two run away. How many rabbits have you now? "I have two rabbits now."

Four less two is how many? "Four less two is two."

Have four rabbits again. How many times could you let two go? "I could let two go twice."

Four contains two how many times? "Four contains two twice."

Make a rabbit house of your right hand. Put two rabbits in it. How many such houses must you have for the four rabbits? What part of your rabbits will be in each house? Two is what part of four? "Two is one-half of four."

Let half of your rabbits run away. How many had you? How many have you now? Two is how many less than four? "Two is two less than four."

How many more rabbits must you catch to have four? Four is how many more than two? "Four is two more than two."

The exaction in such exercises as this is to answer in complete sentences and upon the models given in the questions.

## Leading Events of 1894.

**United States.**—The financial distress in 1893 was followed early in the year by a general paralysis of business. Numerous strikes occurred during the summer; Coxey armies marched to Washington to petition Congress in person for relief. Miners' strikes occurred in West Virginia, Ohio, Illinois, and Pennsylvania. Trouble between George M. Pullman and his men resulted in a sympathetic strike of the American Railway Union. The main centers of the disturbance were Chicago and San Francisco. The mails being delayed and interstate commerce interrupted by the strike, President Cleveland ordered detachments of the United States army to the scene. The strike failed disastrously.

Congress passed the tariff bill increasing the free list and making an all-around reduction of the duties; a tax of two per cent. was put on all portions of incomes over \$4,000.—The senate ratified the treaty excluding Chinese laborers.—The act enabling Utah to become a state was passed, and signed by the president.—On the reassembling of Congress in December it was decided not to take up in the senate the separate tariff bills passed by the house.—Among the bills under consideration are the Nicaragua canal bill and the scheme for the reformation of the financial system.

Last spring Gov. Tillman's attempt to enforce the law in South Carolina providing that no liquor should be sold except at state dispensaries caused an insurrection in Darlington and Florence counties. The state troops finally succeeded in restoring order.—Peary failed to cross Greenland, on account of severe weather.—Several vessels were added to the U. S. navy.—The historic ship *Keorsarge* was wrecked on Roncador reef.—The international boundary commission completed the work of establishing 258 monuments marking the line between Mexico and the United States, from El Paso to the Pacific ocean.—New York state adopted a new constitution; woman suffrage was defeated.—The people of New York City voted for rapid transit and consolidation.

**Canada.**—In June a congress of representatives of British colonies was held at Ottawa, at which Canada, Queensland, Victoria, New South Wales, South Australia, Tasmania, New Zealand, and Cape Colony were represented, to promote steam shipping and telegraphic communication with a view to the development of trade within the empire.—Makenzie Bowell was chosen to fill the premiership left vacant by the death of Sir John Thompson.

**Mexico.**—President Diaz's last report states that the finances are in excellent condition, and that railroad building is active.

**Nicaragua.**—Early in April a force of Nicaraguans entered the town of Bluefields on the Mosquito coast. The Mosquitoes appealed to the British for protection, who sent marines ashore. The Nicaraguans claimed this was a violation of the Clayton-Bulwer treaty, while the British claimed it was done to protect treaty rights. United States cruisers were sent there to protect American interests. The Mosquito chief was restored to power, but in August the Nicaraguans made another raid and obtained possession of the town. Since then the Mosquito territory has been annexed to Nicaragua.

**Costa Rica.**—In May Rafael Iglesias was inaugurated as president.

**Colombia.**—President Nuñez died in September leaving affairs in a very unsettled state.

**Venezuela.**—Complaint is still made that Great Britain is encroaching on Venezuelan territory.

**Paraguay.**—Gen. Eguesquiza was elected president to fill the vacancy caused by the resignation of Gonzales.

**Peru.**—Gen. Andres A. Caceres was inaugurated as president in August. Gen. Pierola, a former president, disputed his authority for a time and made considerable trouble for him.

**Brazil.**—During the year has been seen the utter collapse of the rebellion that started out with so much promise of success. It was hoped that the inauguration of President de Moraes would bring in a period of peace and prosperity, but the rebel Mello and others now threaten to start up the revolution anew.

**Great Britain.**—In March Mr. Gladstone, on account of failing eyesight was obliged to resign, and Lord Rosebery was appointed to succeed him. The government, therefore, remains in the hands of the Liberals, who have had great trouble in carrying out their policy on account of the attitude of the House of Lords. For offenses against the democratic sentiment of the country there were loud calls for the abolition of the hereditary house, but the time for such action does not seem to have yet arrived.—The Manchester ship canal was opened early in the year.—Uganda was formally made a British protectorate.

**France.**—President Carnot was assassinated by an Italian Anarchist in Lyons in June.—The French senate and chamber elected M. Casimir-Perier president for the full term of seven years.—A serious disagreement was threatened between France and England in October on account of the attempt of the former to establish a protectorate over Madagascar.

**Germany.**—In order to secure the passage of its measures the government has attempted to conciliate the Clericals. A measure was put through repealing the law expelling the Jesuits, but it had to run the gauntlet of the state legislatures.—The commercial treaty of Germany with Russia seems to cement good feeling between these countries.—Early in the year a reconciliation took place between the emperor and Prince Bismarck.—In May the Bavarian diet decided to dethrone Otto, the insane king, and transfer the crown to Prince Luitpold, the regent.—Count Caprivi retired from the chancellorship, and Prince Hohenlohe took his place.—The ship canal between the North Sea and the Baltic was opened.

**Italy.**—Heavy taxation and corruption have caused the government considerable trouble during the year.—Only a few weeks ago exposures were made implicating many high officials, among them, it is said, Signor Crispi himself.

**Denmark.**—Copenhagen was made a free port, and tonnage dues were abolished at all Danish ports.

**Switzerland.**—Joseph Zemp was elected president for 1895, and M. Luchenal vice-president.

**Belgium.**—The suffrage has been enlarged so that there are now about 2,000,000 votes in the country.—An international exposition was held at Antwerp.

**Austria-Hungary.**—The funeral of Louis Kossuth in March was a great demonstration in his honor.—The civil marriage bill and other measures tending towards the separation of church and state have just been passed.—The silver jubilee of Strauss, the great composer, was celebrated.

**Russia.**—Alexander III. died in November after a long illness, and was succeeded by his son Nicholas II. It is reported that the latter proposes to give Russia a constitutional government.—Work on the Siberian railroad has made considerable progress.

**Turkey.**—The whole civilized world was shocked by the report of the massacre of thousands of Armenians by Kurds. An investigation will be made.

**Servia.**—The return of ex-King Milan unsettled things in the little kingdom in March. The cabinet resigned and M. Simitch was made premier. The new cabinet maintains peaceful relations with Austria. The decrees expelling ex-King Milan and Queen Natalie were canceled.

**Bulgaria.**—Prime Minister Stambuloff, who represented the national Bulgarian ideal, was obliged to retire in May.

**Spain.**—The principal event of the year was the subduing of the Rifians, after a bloody conflict.

**Morocco.**—Muley Hassan, the sultan, died in June. His son, Abdul Aziz, was obliged to maintain his right to rule at the head of his army, as the succession to the throne was disputed by his uncle, Muley Ismail.

**South Africa.**—The conquest of the Matabeles greatly increased the influence of Cecil Rhodes and will help him to carry through his scheme of a united South Africa.

**East and West Africa.**—The battles with slave raiders show that the slave trade will die hard.



**Madagascar.**—During the latter part of the year France attempted to establish a protectorate in the island. The chances are in favor of its success.

**China, Japan, and Corea.**—A dispute began early in the year between China and Japan over Corea which resulted in war. It is really a war between progressive ideas and conservatism, and hence the general sympathy felt for the Japanese cause among civilized nations. The island warriors have won an almost unbroken series of victories on land and sea, and have brought China to the point of suing for peace.

**Hawaii.**—The new republic of Hawaii was proclaimed on the Fourth of July, with Sanford B. Dole as president. The constitution requires of voters both educational and property tests.

**Samoa.**—Several insurrections have occurred in the islands lately; the people do not seem to be at all satisfied with the tripartite protectorate of Germany, England, and the United States.

**Obituary.**—Among those who have died during the year are the following. *Poets, Authors, and Scholars.*—Prof. W. D. Whitney; M. de Lisle, member of the French academy; James Anthony Froude; Edmund H. Yates, English author and journalist; Prof. Henry Morley; Dr. James Strong, Biblical commentator; Celia Thaxter; Dr. W. F. Poole; Geo. T. Curtis, writer on constitutional law; Oliver Wendell Holmes; Geo. W. Childs; Constance Fenimore Woolson; Robert Michael Ballantyne; Prof. von Helmholtz; Karl Friedrich Brugsch, Egyptologist; Francis Magnard, editor of *Figaro*; Dr. James McCosh; Geo. R. Graham, pioneer magazine publisher; David Dudley Field; Francis H. Underwood, author and editor; Philip Gilbert Hamerton, art critic and essayist; Robert Louis Stevenson.

*Rulers and Statesmen.*—Alexander III., of Russia; Muley Hassan, sultan of Morocco; Louis Kossuth, Hungarian patriot; Lieut.-Gov. Sutphen, New South Wales; ex-War Governors Curtin and Kirkwood; Honoré Mercier, Canadian statesman; Sir John Thompson; Count of Paris; William Walter Phelps; Baron Vey, president of the Hungarian house of magnates; Lord Hannen; Senator Colquitt, of Georgia; M. Auguste Burdeau, president of the French chamber of deputies.

*Churchmen.*—Cardinals Thomas, Dusmet, Paracciani, and Ledochowski; Bishop McNierney; Prof. David Swing; Sister M. Rosina, superioress of the order of Sisters of Charity in the U. S.

*Soldiers.*—Gen. H. W. Slocum, Gen. N. P. Banks, Gen. Geo. Stoneman, Rear Admiral Temple, Gen. Jas. B. Fry, Gen. Daniel Macauley, Gen. Jubel A. Early, Commodore W. D. Whiting.

*Miscellaneous.*—George Innes, artist; Jesse Seligman, banker; Orlando B. Potter; Von Bulow, pianist; Sir Samuel White Baker and Verney Lovett Cameron, explorers; Joseph Keppler, caricaturist; Rubenstein, pianist and composer; Dr. Brown-Sequard, Princess Bismarck.

A chick not many hours old will peck with fair, but not complete accuracy at any small object which catches its eye. Here we have a reflex and responsive action. A stimulus is received in a sense-organ; an impulse is carried centripetally along ingoing or afferent nerve fibers; certain nerve centers are thrown into activity, and an outgoing impulse is carried by efferent nerve fibers to muscles which are thus thrown into co-ordinated activity. It is probable that on the first occurrence of such an action it is purely automatic, and is performed in virtue of the possession by the chick of an inherited organic mechanism. It is accompanied by, but not guided by, consciousness. Such guidance, however, soon becomes evident. Throw to a chick two or three days old half a dozen caterpillars, some of them common "loopers," others yellow and thick "cinnabars." In the absence of previous experience they will be equally seized. But the loopers will be swallowed, while the cinnabars will be dropped. Repeat the experiment next day. The loopers will be gobbled up at once; the cinnabars will remain almost, if not quite, untouched. An association has been formed between the sight and taste in the two cases. Consciousness is no longer merely an accompaniment of the action. It controls—enforcing the action in one case, inhibiting or restraining it in the other. It is probable that in the higher parts of the brain there are special centers, the physiological functioning of which is associated with this control. Such activities of the chick, first those which are merely responsive and automatic, secondly those which are under conscious control, exemplify a wide range of activities both in animals and man.—*Popular Science News.*

### Which is the Oldest State Association?

If the researches of President A. S. Draper, of Illinois university, are to be relied upon, New York has the oldest State Teachers' Association in this country. The fiftieth annual meeting will be held at Syracuse, July 1-3, 1895. The officers are sparing no efforts to make it in every respect a notable one.

## Editorial Notes.

The teacher who thinks that 1895 will be 1894 over again and is satisfied that his old lesson plans, devices, and preparations are good enough may as well pack his trunk and go. The school of 1895 needs teachers of 1895. Do not risk growing cold by standing still. Advance!

That the success of public instruction depends principally on the qualification of teachers is pretty generally recognized. Governor Morton voices public opinion in his message when he says: "Buildings, equipment, library, and apparatus do not make a school. It is upon the fitness of the teacher that our educational system depends for its results." But what constitutes fitness? That is a question which awaits an answer. Let each State Teachers' association appoint a committee to settle upon a minimum standard of qualification, and then urge the law makers to place it on the statutes. They need have no fear of making the minimum too high. The schools are crying for educators.

At this season of new resolutions it is only fitting that superintendents and principals should also choose a new mark. One plan in particular is worth a year's trial, and that is to encourage honest effort, and in general to have a warm heart and a helping hand for their assistants. Some one has said: "We don't praise the heavens only because they give us thunder and lightning, though these are noble and beautiful and purify the atmosphere." More sunshine is what the hard worked teachers are longing for.

"Study the child!" is the watchword of the teachers of the present, and the voice of the croaker is evidence that it has disturbed the rest of a good many slumber-loving people. "What do I want to study children for?" an aggrieved grove-runner writes. "I know what a child is made of the moment I see it [notice the 'it!']. I have to deal with a class and cannot bother with individuals. If there are a few blockheads among them I cannot help it. They are born to be trodden under foot in the world and they may as well get used to it in school. I believe in pushing the class ahead to the next room, and if the great majority passes I know I have done my duty. Child study may be all right in private schools with small classes, and a happy-go-lucky curriculum, but not in public schools with large classes and strict rules." This is a tolerably emphatic declaration and, it is hoped, has eased the writer's mind. What parent would send his child to such a teacher to be educated? Child study has opened a new, a better world for the rising generation. Education has received a new meaning through it. The child must be the measure of all educational result. Each little one fills a particular place in this world. There is, as Kant puts it, a "a divinity" within him. That the educator must try to discover and make free to assert itself. Study the child and learn to administer to his particular needs! In these words lie all the problems of education.



In the first week of 1870 the NEW YORK PUBLIC SCHOOL JOURNAL was issued, the first weekly paper, it is believed, devoted to educational matters. For several years it confined itself to matters pertaining to the schools of New York city, reporting the acts of the board of education with much fullness; its circulation outside of the city was therefore small. In 1874 the present editor was encouraged by several publishers to entertain the idea of putting out a journal from this metropolitan point, that should worthily represent the cause of education. THE PUBLIC SCHOOL JOURNAL was taken as the basis, and its name abbreviated to the NEW YORK SCHOOL JOURNAL, and an arduous, but not unpleasing quarter of a century of toil begun.

The publication was undertaken with great hopefulness because the editor had had extraordinary success in practical teaching; he attributed this to the ideas of education he had obtained by much reading, observation, and reflection. A patron, a writer of considerable note, who has since passed away, remarked, "You have made discoveries in education; you should publish a book." This echoed a feeling that had been growing during the ten years in which he had conducted "Bergen Institute," where the conclusions of about twelve years of thoughtful labor had been put in practice with surprising results. He felt he had something to say that would be of benefit to every teacher, that would lift teaching out of the dreary routine of hearing the reciting of a set form of words it had mainly become.

The first kindergarten in New Jersey was in the Bergen Institute; there was then but one in New York city. Early acquainted with Miss Peabody and Henry Barnard, he had studied the principles of Fröbel, and was prepared, as all must be who accept these, to advance to the legitimate consequence they lead to. The last ten years of his teaching gave him an opportunity to test principles that he felt existed; his writings have drawn from the experiences of those ten years; he has been speaking of things that he knew. He had been "doing the will" and found he "knew of the doctrine."

But in 1874 the schools of America had touched the zero point; a certain routine was followed and believed to be the only way to educate. It was not easy to induce the teachers of those days to teach according to principles. There were of course thoughtful teachers; they regarded the effort to a reform as wasted, and advised that no attempt be made. City Supt. Henry Kidde, an able and clear-headed man, shook his head over the first number of THE JOURNAL which asserted its dedication to a reform in the methods of teaching. "I admit the need," he said, "but I don't believe it can be done; the teachers themselves are all opposed to it; how can you expect them to take a paper that informs them they are incompetent?"

The first ten years showed every week the soundness of this judgment. The city teachers had a course marked out for them; they only wanted a paper that would enable them to pack the memories of their pupils so they would stay packed. The rural teachers were free to teach as they believed; they sought a paper that disclosed the right way; especially were the teachers of the boundless West open to conviction. The great reform in educational methods began in the West, and slowly rolled eastward.

The second decade opened with the rolling up of the curtain and disclosing the schools of Quincy, Massachu-

setts, operated in accordance with educational principles; THE JOURNAL had now something to point to; the scattered issues of the paper had heralded the way for the eloquence of Col. Parker. Had it not been for his appearance the day of educational freedom might have been long delayed. The Eastern teachers that had hung aloof from THE JOURNAL now became subscribers; New England felt that in it was the same spirit that had animated Horace Mann when he made pleas for the children in eloquence that has not yet lost its influence.

As the audience of THE JOURNAL increased it was felt that a special paper was needed, devoted mainly to *methods*; this led to the publication of the monthly TEACHERS' INSTITUTE at \$1.00 per year, which has become an educational magazine. Students of education began to be found who desired to study the subject of education somewhat exhaustively, and so EDUCATIONAL FOUNDATIONS, at \$1.00, was sent out monthly. A department in the paper for the primary teachers had been found necessary for several years; in 1894 this was put into a separate form as THE PRIMARY SCHOOL, and issued monthly at \$1.00. To meet the need for general information and for current news a handsome sheet, OUR TIMES, at 30 cents, is issued.

The year 1895 begins the second quarter of a century in the life of THE JOURNAL. Very many of the reforms it proposed have been reached. The people think differently concerning education; the teachers are doing a different kind of work, and especially they look at the child from a different standpoint. In this change of opinion THE JOURNAL has been a potent force; it might have been this, and yet little have been accomplished had there not been thoughtful, devoted, unselfish men and women in the school-rooms of the country who had the most earnest desire to know and do the truth in education. To these THE JOURNAL pointed the way in 1874 and to the same circle, now grown immensely broad, THE JOURNAL addresses itself in the year 1895.

The movement in England to express sympathy with Armenia is well worth watching. Mr. Gladstone made a ringing speech: "The history of Turkey is a sad and painful one. The Turkish race has not been without remarkable, even fine, qualities; but from too many points of view it has been a scourge, which has been made use of by a wise Providence for the sins of the world. If these tales of murder, violation, and outrage be true, well, then, they cannot be overlooked, nor can they be made light of. I have lived to see the empire of Turkey in Europe reduced to less than one-half of what it was when I was born, and why? Simply because of its misdeeds, and the great record written by the hand of Almighty God against its injustice, lust, and most abominable cruelty. I hope and feel sure that the government of Great Britain will do everything that can be done to pierce to the bottom this mystery and make the facts known to the world."

The great body of the members of the Liberal party are resolved that there shall be some practical intervention in Armenia. The commission of inquiry is composed only of dragomans. Russia's delegate is M. Maior; M. Vilbert, the French delegate, and England's delegate, Mr. Shapley.

THE SCHOOL JOURNAL, published weekly at \$2.50 per year, is the best paper for school boards, superintendents, principals, and all teachers who want to know of educational thought and movements. The news concerning new buildings, the additions of departments of music, drawing, gymnastics, etc., will be of great value. Already a number of teachers have, by consulting these notes, laid plans for better remuneration.

THE TEACHERS' INSTITUTE, at \$1.00 per year, is per excellence the educational magazine of the country; for teachers who want the best *methods*, and to grow *pedagogically*, that is the paper.

THE PRIMARY SCHOOL, at \$1.00 per year, is a right hand of help for the teacher of young children.

EDUCATIONAL FOUNDATIONS, at \$1.00 per year, is for students of pedagogy. It discusses the History, Principles, Methods, and Civics of Education, and Child Study.

OUR TIMES is for current news, 30 cents a year.

A superintendent will need THE SCHOOL JOURNAL; his assistants THE INSTITUTE and PRIMARY SCHOOL; the one interested in pedagogy will want FOUNDATIONS.

Earnest teachers seeking advancement take THE JOURNAL, INSTITUTE, and FOUNDATIONS.



Calvin Milton Woodward.

By THE EDITOR.

Dr. Calvin M. Woodward was born Aug. 25, 1837, at Fitchburg, Mass. His ancestors were early English settlers and Revolutionary soldiers. He farmed summers, went to school winters. He was regarded as a good scholar, particularly strong in mathematics. He studied in high school under E. A. Hubbard; entered Harvard college, July, 1856; graduated (A. B.) 1860, being first in mathematics; was fond of athletics and pulled in the "Harvard," in his senior year.

His first teaching was done in a country school at Ashburnham, Mass., when 18 years old, before going to college. He also taught short terms at Westminster and Harvard, Mass., during his sophomore and junior years. In October, 1860, he was elected principal of Brown high school, Newburyport, Mass., and held the place five years, including a year while in the army, as Capt. Co. A., 48th M. V. M., serving in Louisiana.

In 1865, Dr. Woodward accepted a position in Washington university, St. Louis, to teach Latin, Greek, and mathematics. He was made assistant professor in mathematics in 1867; professor of drawing and descriptive geometry in 1869; and Thayer professor of mathematics and applied mechanics in 1870. Having drawn up the plan of the school of engineering, he was elected dean in 1871. He is still dean, and holds the last named chair. Next June completes his 30 years in Washington university.

In 1872, he organized shop work for students in engineering, and in 1877 had three well equipped shops. In 1878-9-80, he tried experiments with tool work in classes of boys below the grade of college students. He organized the manual training school as a new departure complete in itself in 1879, and has been its director for 14 successful years.

Dr. Woodward's first essay on manual training was published in 1877, and a second in 1878. Since then he has written numerous papers and reports and has lectured on the subject in thirty American cities. By invitation he sent a paper on manual training to the conference in London in 1884, and a year later went abroad to study the educational institutions of Europe. During this tour he delivered three addresses on manual training at Manchester, England.

A book on "The Aims, Methods and Results of Manual Training," appeared in 1887; and in 1890, two pamphlets on "The Educational Value of Manual Training" were published; also a volume on "Manual Training as a Feature in Education," was contributed to the "Contemporary Science" series.

Mr. Woodward is a member of the council of the N. E. A., and has contributed a paper on "The Relation of Technical to Liberal Education;" he is also president of the Board of Regents of the University of Missouri.

Always greatly interested in scientific subjects he has written many scientific papers. He is a Fellow of the American Association for the Advancement of Science, and has been an associate member of the American Society of Civil Engineers, also a member of the American Society of Mechanical Engineers. He is the author of the "History of the St. Louis Bridge," in which he invested the most abstruse calculations with all the fascination of an interesting story.

Dr. Woodward is still hearty, active, and enthusiastic; equally fond of a good pair of oars, a game of chess, a problem in mechanics, and a controversy on manual training.

The institutes of Otsego county, N. Y., usually draw large crowds. At the meeting held about two weeks ago there were more than 1200 persons in attendance. The Oneonta normal school sent 750 pupils. Besides there were more than 450 teachers of the county.

The Salt Lake *Argus*, in its splendid Christmas issue, had a most flattering article upon the public schools of Salt Lake and gives great credit to President Wm. Nelson, of the board of education, and to Supt. J. F. Millspaugh.

President J. E. Talmage, of Utah university, has recently had conferred upon him the degree of F. R. S., by the Royal Society of Edinburgh, Scotland. Dr. Talmage is the sixth American member.

Would that there were more such sensible parents as the one who wrote the following to a Maine newspaper:

"I believe the teachers are as a rule very easy with their pupils. And I think if when a child comes home telling such dreadful things the teacher may have done, parents can only do their duty by (in most cases) advising the child to go back to school and behave himself and there won't be any need of punishment. A child so easily takes advantage of teacher or parent. It is not safe to take sides against the teachers unless one is thoroughly convinced they be wrong. This idea about unjust punishment is becoming a craze. My belief is that if more parents would thoroughly impress the children that they are the ones at fault there would be less fault found with the teachers and it would be of great value to the future of the children."

The Philadelphia board of education has adopted the following decision regarding vaccination of public school pupils:

"The rule requiring every pupil attending the public schools to furnish a medical certificate of successful vaccination or other satisfactory evidence of immunity from smallpox shall be strictly enforced. Provided that when any evidence of immunity from smallpox is offered other than a successful vaccination, it shall be explicitly stated in the certificate. In case the pupil is not protected by an attack of varioloid or smallpox a re-vaccination shall be required and if unsuccessful a certificate to this effect shall be accepted and the child shall be allowed to attend school, but before entering any subsequent September term another certificate will be required."

A proposition to make a general distribution of government maps among schools throughout the country, has been made by Director Walcott, of the geological survey, and is now before Congress. The amendment to the appropriation bill, if adopted, authorizes the director to print 15,000 copies of a set of ten topographical atlas sheets for distribution to all public, grammar, normal, and high schools, academies, colleges, and universities in the United States. There are between 13,000 and 14,000 of these institutions, and the total appropriation necessary for the distribution would be about \$5,000.

Boston is shocked. Dr. Isaac J. Lansing in a recent address before the Baptist Social Union of that city, condemned in severe terms the total inadequacy of her school accommodations. "The buildings," he said, "are insufficient, the ventilation atrocious, the sanitary conditions abominable." Boston, he declared, had out of \$300,000,000 expended, appropriated but one per cent. for school-houses. Among the towns and cities of Massachusetts it ranked 332nd in its educational facilities, proportionally to valuation, and only 20 towns and one city were below it.

St. Louis proposes to limit the number of its normal school pupils to 150. The argument is brought forward that there are too many teachers. Is this really a fact? Has St. Louis so many qualified applicants for positions as teachers that it must reduce the supply? We doubt it. The city certainly does not want to have it appear that he has stopped growing. If the Normal turns out more graduates than the city can place there are other towns that will want them. The cry here in the East is, "It sounds reasonable enough to drop all incompetent teachers from the public pay-rolls and put professional men and women in their places, but where shall we get all the material?"

The annual report of state superintendent Pattengill, shows that Michigan has 585 graded and 6,580 ungraded school districts. There are 677,676 children of school age of whom 455,598 are enrolled in the schools; 248,099 attend graded schools and 207,499 ungraded. It is estimated that 41,717 pupils attend select schools. Of the 16,305 teachers, 5,264 are employed in graded schools and 11,041 in ungraded. There are 3,330 men and 13,005 women teachers. Of the 5,264 graded teachers, only 773 are men. Total wages paid are \$3,758,905.56, of which \$2,326,517.74 are paid to graded teachers. There are 5,897 frame, 1,358 brick, 74 stone and 361 log school-houses; total, 7,690, valued at \$15,759,921. The total school expenses for the year past were \$6,062,646.66.

Those who are skeptical as to the value of special instruction in conduct will find abundant proof to change their minds in the results obtained in the St. Paul, Minn., schools. Supt. Gilbert recently told a delightful story of the effect of a lesson on kindness. It seems that for some years shortly before Thanksgiving day the meaning of the festival is made a special subject of discussion in the St. Paul schools. The result is that the children voluntarily contribute wagonloads of food and clothing to the relief of the poor on that day. On one of these occasions the boys noticed that the horse which was to draw one load of their gifts was without a blanket. Immediately they stripped off their coats to cover the animal. Can those who "have no time" for moral instruction show up a similar example of prompt and concerted humane action on the part of their pupils?

Hampton institute keeps a record of the Indians who have been there. Of 460 former pupils reported on, the record of 98 was set down as excellent, of 219 good, of 91 fair, of 35 poor, and of 17 bad. After returning home they teach school, act as missionaries or catechists, practice various trades or professions, or loaf about the agencies, leading the idle life of their people. Many of the former pupils are recorded as dying early, or being delicate, and the untamed Indians commonly believe that the Eastern schools are likely to be fatal to their people. The school authorities insist that the agency Indians are subject to many diseases. The habit of gorging themselves on ration day and starving for the rest of the week is partly responsible for a vast deal of ill health; the bad sanitary conditions of cabin rather than wigwam life helps to account for many deaths, inherited disease, and the reckless use of tobacco from infancy are also causes of a high mortality. Many of the Indian students are reported as having lands, cattle, and comfortable wooden houses, and some are married Christian fashion to former fellow students. Intemperance seems to be the besetting sin of the educated Indian as of his savage brother. Not

only does the educated red man occasionally revert to his former condition as a "blanket Indian," but takes a wife Indian fashion, and sometimes the legal wife is deserted for a woman bought for ponies.

Omaha, Neb., finding it necessary to reduce her expenses in order to make ends meet without increasing the burdens of taxation, goes about it in the old fashioned way by beginning with the cutting down of the moneys for school purposes. The present superintendent, Dr. Marble, is paid a lower salary than his predecessor, Mr. Fitzpatrick, and there is talk of attacking the pay of the teachers. We have always looked upon Omaha as one of the most progressive cities of the Great West. She ought not to follow the bad example of some Eastern cities. The *Omaha Bee* in a vigorous editorial recently pointed out ways and means to increase the revenue and reduce running expenses, without curtailing the school funds. Several million dollars worth of property, it says, has been exempted from taxation under all sorts of pretexts and without a shadow of legal authority for such action; besides, "new

## For Babies and Children.

All children need the elements of food found in Cod-liver Oil and Hypophosphites of Lime and Soda. Many are able to derive these properties from their ordinary food. *But many do not*; consequently they do not thrive. Their teeth are defective. Their bones are not properly formed. Their blood is depleted, cheeks lack color, and vitality is at a low ebb. Their brain takes all their nourishment and nothing is left for the groundwork of their future health.

## Scott's Emulsion

of Cod-liver Oil and Hypophosphites, is an easy and concentrated form of the food properties that are *absolutely necessary* to all growing children. It overcomes wasting tendencies, enriches and purifies the blood, makes healthy flesh, and brings rosy cheeks and bright eyes to all the babies and children who take it. It is nourishment to the bones as well as to the vital organs and muscular system.

### "CHRISTIAN INTELLIGENCER."

MESSRS. SCOTT & BOWNE,

GENTLEMEN—A sense of gratitude for the benefit received from the use of Scott's Emulsion of Cod-liver Oil, in the case of my young son, prompts me to write you that others may profit by my experience. For some months the little fellow, who had never been a rugged child, seemed to steadily waste away. He lost all desire for play, became weak and nervous, had little appetite, much trouble in obtaining sleep, and was very susceptible to the slightest changes in the weather. I was advised he was growing too fast and a tonic prescribed, but he continued to lose in weight. One day a friend said: "What that child needs is *more nourishment*, and the thing to give him is Scott's Emulsion of Cod-liver Oil. It would make a new boy of him in a month." He spoke so earnestly I decided to follow his advice, and the effect was almost magical. An improved appetite was at once noted, the roses gradually returned to his cheeks, he experienced no trouble from sleeplessness, a spirit of fun and desire for play developed, he gained rapidly in weight, and in about a month verified my friend's confident prediction, for he was indeed a new boy. To-day he is apparently as strong and healthy as a child could be, and the wonderful change was wrought by Scott's Emulsion of Cod-liver Oil and Hypophosphites.

NEW YORK, Nov. 5, 1894.

Respectfully yours,

R. F. BOGARDUS.

SCOTT & BOWNE, New-York City. All Druggists. 50 cents and \$1.00.



offices and sinecures have been created from year to year," and "scores of men are drawing salaries whose services can be dispensed with without in the least impairing the efficiency of any branch of the service." Let the *Bee's* suggestions be adopted. Collect all taxes that are justly due to the city and lop off the supernumeraries, but—we repeat it—do not reduce the funds needed for the education of the boys and girls in the schools.

Governor Morton in his first message to the New York legislature speaks thus of the state system of public instruction:

"It is a matter of congratulation that the leadership in New York state in educational affairs is everywhere recognized. Her present system of supervision and examinations is uplifting the calling of the teacher, giving more assurance of employment to those well qualified, and insuring to the public a more adequate return for the liberal expenditure that has always honorably distinguished the Empire state. Buildings, equipment, library, and apparatus do not make a school. It is upon the fitness of the teacher that our educational system depends for its results. Toward this end our state is making unexampled progress. Our normal schools, teachers' institutes, and teachers' training classes are growing in efficiency and are disseminating a professional spirit which reaches the smallest country schools. Corresponding progress appears along the distinctly different line of higher education. Particularly by concentrating in a responsible body the supervision and control of higher institutions of learning and professional preparation, the public interests are more adequately protected. It is recommended that the legislature provide liberally but with economic discretion for the carrying on of the system of public education."

### New York City.

A brainless frog was exhibited before the American Anatomists' Association last week. Dr. Burt G. Wilder, of Cornell university, said that some time before when he turned on his ankle, he concluded that the reason his ankles was not as strong as a horse's was that his ancestors lived in trees and did not use their ankles to the extent we do. He then brought out a frog without a brain; the scar where the brain had been taken out was behind the left ear. The frog gave no sign when a motion was made before his eyes—showing he had not brains enough to receive a visual impression. On touching his back he wiggled and acted as though he would like to get away, but had not will power to do it. When put on a cylinder he made efforts to keep from slipping off, showing mental ability resided somewhere yet. And when put in water he struck out as any frog would, showing that all movements do not come from the brain. Food pushed into his mouth, when it choked him, was swallowed—showing that action was reflected from the spinal cord.

Commissioner Hubbel who is well known to the readers of THE JOURNAL as the organizer of the beneficent anti-cigarette movement, has urged the board of education to encourage physical training among pupils. His resolution gives permission to the trustees to appoint a board of physicians for the purpose of taking physical measurements of such pupils in the grammar grades as may desire it, such services to be performed gratuitously; that on such examination the physician point out to such students as may be found physically deficient any matter especially calling for correction; that permission be given to such male pupils of the grammar grades as may be designated by their respective principals to parade annually on the third Saturday of June; that such day shall be known as Public Schools' day.

The meeting of the New York State Library Association will be held at the parlors of the Y. M. C. A., 52 East 23d street, corner 4th avenue, on Friday and Saturday, January 11-12. Questions of particular interest to teachers will be discussed on Saturday morning. Miss Mary S. Cutter, of Albany, will speak on "Principles of Selection of Books." "Reading for the Young" will be the principal subject of discussion. Mr. Edward H. Boyer, of New York, will answer the question "How can we induce Parents to Oversee their Children's Reading?" Miss Marguerite Merington, of New York, and Mr. John C. Sickley, of Poughkeepsie, "How may we make the guiding of her pupil's reading a part of the teacher's work?" Miss Ellen M. Coe, of New York, "What can be done to help a boy to like good books after he has fallen into the dime-novel habit?"

The presence and co-operation of teachers and school officers at this meeting is specially invited.

### Free Classes in Phonography.

Encouraged by the success of the free classes in phonography for New York public school teachers, now being held at the City College under the auspices of Isaac Pitman & Sons, that firm are now arranging similar classes for the teachers in the Brooklyn public schools. These will be held at the Burrill Metropolitan school of Isaac Pitman, Shorthand, 591 Lafayette Ave., near Nosstrand, commencing Friday, January 18, at 8 P. M. Teachers in the Brooklyn schools wishing to take advantage of this unusual opportunity should communicate immediately, personally or by letter, with Isaac Pitman & Sons, 33 Union Square, New York, giving the name of school in which they are teaching. The instruction will be entirely free.

### Iowa.

The State Teachers' Association held a three days' session at Des Moines during Christmas week. It is estimated that upward of 1,000 teachers were present. Governor Jackson welcomed them in cordial words. President Seeley, of the state normal school at Cedar Falls, responded. Dr. W. M. Beardshear occupied the chair.

There was a meeting of school directors called in connection with the association. The people of Iowa are beginning to realize that those who serve on school boards need more than general business ability to do satisfactory work. This certainly shows progress. Iowa does not claim to be the first state to invite the school directors to a discussion of subjects relating to schools and education, but it is ahead of many Eastern states which have not yet gotten over the idea that any man with common sense and a little "sand" is fit to serve on school boards.

Another departure of importance was the organization of a state association for child study. A circular had been sent out, signed by Supt. Scott, of Oskaloosa, Prof. G. T. W. Patrick, of the state university, Supt. C. F. Shelton, Supt. Geo. L. Miller, Prof. F. B. Cooper, State Supt. Henry Sabin, and Supt. H. E. Kratz, of Sioux City. Supt. Kratz whose excellent work for the advancement of child study has been spoken of in THE JOURNAL was elected chairman, and Supt. O. C. Scott, secretary. The following is the substance of the circular in response to which the organization was formed:

Believing that well organized, systematic child study will lead to a better understanding of child nature, more intelligent teaching, and place education on a more scientific basis, a meeting will be held for the purpose of forming an organization and laying plans for the prosecution of such study.

The following topics are suggested as a basis of discussion for the preliminary meeting:

"Value of Child Study in General."

"Brief Reports of Investigations Made."

"Most Helpful Lines to Investigate."

"Plans of Work and Organization of Club."

Prof. Patrick spoke of the national movement in child study and dwelt particularly on its educational value. Supt. Kratz made an interesting report of some of his investigations in this direction. Prin. Stover, of Oskaloosa, reported on his line of study and bibliography. Supt. Scott passed blanks and outlines he has been using and explained the same. Supt. Bostwick, of Clinton, told of the meeting held at Champaign, Ill., for the advancement of this new study. Mr. Harvey, of Burlington, explained the plan followed in his pedagogy classes. Messrs. C. C. Stover and Supt. C. P. Rogers, of Marshalltown, are to report outlines for study next year.

(A more detailed account of the association's work will be given in next week's issue of THE JOURNAL.)

### Joint Meeting of Learned Societies.

On December 27-29 a joint meeting was held at the University of Pennsylvania, Philadelphia, of the American Oriental Society, Philological Association, Modern Language Association, Dialect Society, Archeological Institute, Spelling Reform Association, and other learned organizations.

The meeting of the Spelling Reform Association was held on the afternoon of the 27th inst. Prof. Francis A. March, its president, made the opening address, giving a résumé of what had been accomplished by the efforts made for improved spelling since the formation of the association in 1876. Philologists, both in England and America, have studied the subject closely and agree that no hindrance to philological research or to etymology will result from reformed orthography. Teachers and the public have been won over, to a considerable extent, and belief in the sacredness and immutability of the present orthography has been shaken. Moreover fifteen hundred spellings of common words, with from one to three silent letters omitted under definite rules, have been incorporated as authorized spellings into the Century and Standard Dictionaries. The advance, though slow, has been sure.

Dr. H. W. Wayland gave as reasons why the reform progressed so slowly: 1. Sentiment. People are attached to the antiquated spelling of their fathers. 2. Ignorance. Some who profess to be scholars are still talking about the argument from etymology, though this argument was given up long ago by Max Muller and all philologists worthy of the name. 3. Cowardice. 4. Selfishness. These obstacles may all be summed up under the name of conservatism.

Dr. James W. Walk urged spelling reform on account of the benefit it would confer upon the poor. He said, truly, that a very large part of the short school life of poor children is taken up in teaching them our illogical and unreasonable orthography. Could we have a sensible spelling all this time would be saved, and, in addition, the child's mind would not be confused by a method which is obnoxious to all the rules of logic and common sense.

J. H. Allen, of Massachusetts, and Eliza B. Burnz, both of whom were among the founders of the association, made ad-

addresses. The latter asked, "What shall we individually do to further the reform?" She urged as a first step that all persons who favored a revision of orthography make themselves thoroughly acquainted with the fifteen hundred revised spellings found in the latest dictionaries, and use more or less of them in their correspondence and publications. While not every one may possess a Century or Standard Dictionary, each can send to the Bureau of Education at Washington for a copy of the pamphlet entitled, "Circular of Information No. 8, 1893," which contains a list of the shorter spellings, and is sent free on application. This list, and the rules which govern the shorter spellings, should be studied until they can be applied when writing.

As a preparation for the general use of revised spelling Mrs. Burnz recommended that spelling reformers should in their respective districts, see to it that poor tonics—that is the study of the elements of English speech apart from letters—is thoroughly taught in schools. At present the ignorance of elementary sounds is so dense that few persons, even in the teacher's profession, can unhesitatingly separate words into their vocal elements. Yet it is more important for a child to speak well than to spell well.

Patterson Du Bois, of the *Sunday School Times*, made an earnest appeal that our children's intellects shall not be longer stultified by a barbarous orthography. Teachers should give as a reason for learning the present spelling, not that it is *right* but that custom requires it; and offer an expectation to the child that some day it will be made more reasonable.

Prof. Scott closed the meeting with an address in which he said: "All the considerations of scholarship and reason are in favor of the reform."

In some places the schools are closed when a contagious disease breaks out among the children. This is carrying precaution a little too far. The school term is brief enough as it is and should not be curtailed by unnecessary interruptions. Brookline, Mass., has adopted a plan that if strictly enforced will check the spread of such diseases as diphtheria, scarlet fever, or measles, without ordering a general vacation. "No child," the board of health says, "shall be allowed to attend school from any house where there is or has been a case of diphtheria, scarlet fever, or measles until the expiration of at least four weeks from the commencement of the last case in the house, if diphtheria six weeks, if scarlet fever and if measles two weeks after the disappearance of the eruption; and till a certificate of the attending physician is furnished to the board of health that all danger of infection has passed; said certificate, in cases of diphtheria, to be based on the result of a bacteriological examination." Further, "no child that has visited a house in which there was at the time a case of scarlet fever shall attend school till the expiration of two weeks following exposure." The board has also issued a valuable paper on diphtheria, its treatment, and suggestions for preventing the spread of scarlet fever, copies of which are distributed among the residents of the town. This certainly is the most sensible way of going about this work.

## Letters.

### Educating the Freedman at Thyne Institute.

[SPECIAL CORRESPONDENCE.]

Among the denominations that are doing much for the development and uplifting of the negro race in the South, the United Presbyterian church holds a very important place. Since the civil war there have been established throughout the Southern states, eight educational institutions under the auspices of this church. Thyne institute is one of them. While visiting at Chase City not long since I took the opportunity to acquaint myself with the work it is doing.

The institute is situated about a mile from town in a large and beautiful oak grove. There are two large buildings besides the principal's residence—the Girls' industrial home and Thyne institute proper. The school also has connected with it about 150 acres of good land which will undoubtedly be cultivated more extensively some day.

As my visit to the institute happened during the holidays, the school was not in session; still through the kindness of Dr. Moore I was entertained for two hours with a description and examination of specimens of the work. Dr. J. M. Moore, formerly of Pittsburg, Pa., came here about two years ago to take charge of the work and he at once set about organizing and extending the course of study. Now the school has a normal course extending over three years and seems to be established on a foundation that has the true educational spirit in it.

The aim of the school is three-fold—to educate students to fit them for life's work in the home, as teachers in the public schools, and as religious instructors, *i.e.* moral, mental, and industrial education are united. This three-fold idea is carried out through the entire course.

Though Dr. Moore is a minister, he is a man of broad educational ideas, and, from what I could learn, is assisted by an excellent corps of teachers. There are four departments: the normal, grammar, intermediate, and primary department, which is also the training school for the normal students. Twelve years are required to complete the course—four in the primary, three in the intermediate, two in the grammar, and three in the normal. Through the first seven years of the course, the girls are given one-half hour each day in sewing under the direction of a competent teacher, and during the latter part of the course they go into the kitchen where they are engaged in preparing the meals for the institute. All this industrial work is performed under the supervision of Miss Cleland who is matron of the Girls' industrial home. This is a large three-story building with beautiful grounds about it, and containing large, nicely furnished rooms, which will accommodate two girls each. These rooms are well ventilated and calculated to cultivate in the student a taste for what goes to make home-life pleasant. As yet this industrial feature of the institution has not been extended to the boys

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through want of funds, though it is hoped that in a short time there will be a manual training department connected with the school to give the boys an industrial education.

Very good specimens of drawing, clay-modeling and color-work were shown. Kindergarten methods are used in the primary department, and Prang's system of drawing and modeling was lately introduced. Good relief maps and specimens of composition work were seen that would do credit to any white school. The normal course is a very good one for the work it is designed to accomplish. Among the subjects of this course are: civil government, English literature, physical geography, moral science, the natural sciences, Bible study, theory of teaching, psychology, and methods of church work. Each student is required to spend fifty weeks in all in the training school under the direction of Miss Clara Hazen.

At present there are about 275 pupils in attendance, the majority of which are day pupils. Tuition is free to all and boarders are charged the nominal sum of \$5 per month or \$45 for the nine months' session. Many of the students earn money enough during the three months' vacation to pay their way during the year. Some of the boys went to Pennsylvania where they worked all summer in the iron works of different cities. Some earn money at home and more go as porters and waiters to hotels. Second-hand clothing and books are secured at the North and shipped here to be distributed or sold to the poorer pupils.

The prevalent patriotic sentiment is very noticeable. The chapel and rooms were decorated with the stars and stripes. Every morning the color guard hoists the colors above the main building.

That Thynne institute and many other institutions of a like nature throughout the South are doing a great work cannot be doubted. It is evident that one of the most potent influences for the uplifting of the colored race, as it is for any race, is the home influence. Homes are never made better or pleasanter through the mere knowledge gained from books; this must come through the industrial or manual training school. Then, too, it requires but little knowledge of the state of the race to know that that education which appeals most strongly to the moral nature of the colored child will be the most successful. What the colored race of the South stand most in need of to-day are better schools—industrial schools, and more of them, better teachers to take charge of these schools, better preachers to fill the pulpits, and a broader and deeper sympathy from their white neighbors. When this has been consummated, there is hope that lynch law will be forgotten and the negro will take his place among his fellowmen.

Asheville, N. C.

R. J. TIGHE.

I write to endorse the plan, suggested by W. A. Gillon in the closing paragraph of his article "The Model School Museum." (SCHOOL JOURNAL, December.) I wish very much to make exchanges, especially in the line of geological specimens. From this section of the country we can furnish specimens of trilobites, glacier-scratched rock, septaria, a few varieties of coral, the cyathophylloid and favoritex, and varieties of drift rock; or, granite, gneiss, mica schist, garnetiferous rock, etc.

I hope you will be flooded with applications so that an exchange column may be started.

Akron, N. Y.

I think there is a lack of the "practical" in our present school system; I mean that training that tends to fit our boys and girls for future life.

We open the youthful mouth at about the age of sixteen to cram down two solid years of Latin, a pinch of geometry enough to fit him for the state university, while if you were to ask that youth to write you a form for a promissory note, he would gaze at the stars for a reply. Many of our schools teach some of the "actual business practice" in the grammar department, but this is by no means enough; a child soon forgets his few weeks' work in this department, while he never forgets the multiplication table.

Our Western schools are filled with pupils of life and energy, they feel the need of an education that will help them make a living in this new and undeveloped country. They cannot afford to spend three or four years in the study of Latin to enter a college or university, but they demand of our high schools a four-years' course including some of those branches that will enable them to pick up a flower and examine it with at least some knowledge of its parts, and look upon these rocks around us with some definite idea of their structure, but above all to know how to draw up a mortgage, count interest at 1 1/4 per cent. a month, keep father's books and attend to mother's butter account.

I believe in our fourth grades specimens of notes should be given pupils to write. Even in the second and third grade let them buy and sell slate pencils, etc., making out a bill for the same and also a receipt, and, my word for it, they will not forget it when they reach the high school.

We have a little book called "Hygiene" devoted to the terrible effects of alcohol; a few words from the teacher will do more towards leading the pupil in the right path, than all the wonderful stories in the text-books. I have known boys to test the effects of cigarette smoking to see if they agreed with the author of the text-book. Hygiene should be taught, but give us more hygiene and less alcohol.

Our enrollment is 672. Our per cent. of attendance based upon the enrollment was 92 for November.

Moscow, Idaho.

(Supt.) J. C. MUERMAN.

I note with much satisfaction the suggestion made by a subscriber regarding the establishment of an educational exchange. I am sure that such a department conducted by some leading educational publication like THE SCHOOL JOURNAL, would be liberally patronized by all the secondary schools of New York, as well as many throughout the United States. I hope very soon to learn that you have established such a department. T. H. ARMSTRONG.—Friendship, N. Y.

### School Note-Book.

Mr. Editor.—I agree with you heartily in all that you said some time ago in THE JOURNAL about note-books. The Scientific American once said: "If any young man in any kind of business will write down whatever seems to him new and important he will in five years have a note-book far superior to any printed book that he could buy."

There is, however, another kind of note-book that I have found very useful, which I used to call my Friday note-book because we kept Friday for all irregular studies and for all odds and ends, so that I could then get some time to talk to my pupils.

During the week when a teacher is busy with the lesson in hand he often thinks of something that he would like to explain or refer to but has not the time without disarranging the order of studies and thus sacrificing the greater to the less. If he will always have an open blank-book beside him a single word sometimes jotted down will be sufficient to recall the idea when he and his pupils have leisure and thus many a valuable explanation or interesting illustration may be saved from forgetfulness and be made to do its duty in enlightening or interesting the young.

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Germantown, N. Y.

CHAS. R. TRAVERS.

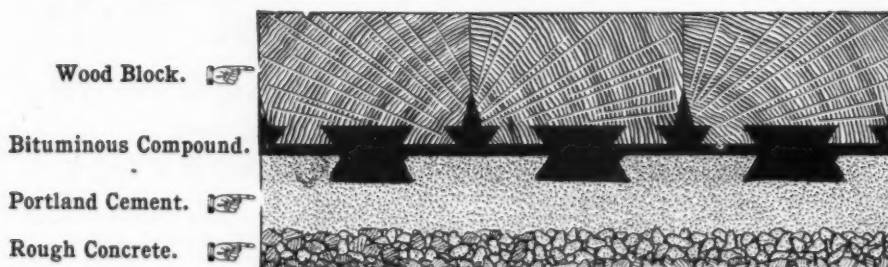
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## General Notes.

No book so far, we believe, has treated the subject of proper names so extensively as the *Century Cyclopædia of Names* recently issued. When it is considered what a wide field is covered by this work we are astonished at the accuracy and completeness of the information presented. To be sure a purely biographical dictionary, or a gazetteer, or a classical dictionary, would give more detailed information about many things and contain many names not found here, yet for a single book of reference for the general student the *Century Cyclopædia* is unsurpassed.

The volume is uniform in style, size, and binding with the *Century Dictionary*, and is in part a true supplement because it contains matter that might have been incorporated with the dictionary, and partly an independent work, which finds its prototypes in books devoted to special fields.

The object of the work is stated in the preface as "primarily a dictionary of proper names, giving their orthography and pronunciation and such explanation of them as is necessary for their identification; and, secondarily, a condensed cyclopædia in its somewhat fuller treatment of several thousand of the more important articles." In the 1805 three-column pages there are on an average about forty-two entries to a page; this alone shows what an immense field has been covered. Seventy-five per cent. of these are pretty evenly divided between biography and geography. A large part of the remainder is devoted to mythology and general history, leaving a small percentage for famous books, newspapers, poems, plays, songs, pictures, statuary, fictitious and dramatic characters, astronomical names, etc. The articles are mostly quite short; the small print and the great care exercised in condensation, has, however, enabled the compilers to put a large amount of matter in a small space. The longest article, we believe, is about four columns. A few are a column in length, but a great number cover a quarter of a column, and some only a single line. Very careful attention has been given to spelling and pronunciation; this will make the book of great assistance to teachers and schools, especially as an authority on biographical and geographical names.

Some geographical names we have failed to find in this encyclopædia; no book, however, can contain everything. All the prominent subjects have been generously treated, and this makes it of great value to all who have occasion to consult such a work. The volume was edited by Benjamin E. Smith, A. M., managing editor of the *Century Dictionary*, assisted by a number of eminent specialists. (Century Co., New York.)

John B. Gough, says: "For Sore Throat, especially when tending to ulceration, I have found *Fond's Extract* very beneficial."

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Mr. J. S. Barcus, formerly in charge of the encyclopedic department of the Werner Co. has formed a copartnership with Mr. James Clarke. The style of the firm is Clarke & Barcus, Publishers, and their office is 45 Vesey St., N. Y. city.

Ginn & Co., Boston, have nearly ready Alfred de Musset: Selections from his Poetry and Comedies, edited with notes by Prof. L. Oscar Kuhns, of Wesleyan university.



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Our Mary had a little dog,  
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The streets were deep with mud,  
When suddenly our Mary heard  
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And, turning 'round, she shuddered, as  
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Before her was her poodle dear,  
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Her grimy dog she rescued—led  
Him homeward with a rope,  
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Among the article in the January *Forum* are the following: "Is the Existing Income Tax Unconstitutional?" by Mr. David A. Wells, the well-known economist, who writes about a point or basis on which he thinks the constitutionality of the tax may be impugned with success; "The Anatomy of a Tenement Street," by Alvan F. Sanborn, who describes, after careful and continued observations and residence in a typical tenement street, the daily life, customs, habits, and the morals of its inhabitants; "The Proper Training and the Future of the Indians," by Maj. J. W. Powell; "To Ancient Greek Through Modern? No!" by Prof. Paul Shorey, of Chicago university, who replies to Mr. Gennadius' article in the October *Forum* on "Teaching Greek as a Living Language;" "Dickens' Place in Literature," being article No. V. in Frederic Harrison's series on the Great Victorian Writers; "A New Aid to Education," by Wm. R. Eastman, describing the methods and practical working of the new system of loaning books through traveling libraries lately put into successful operation by the Library of the University of the state of New York; "The Increasing Cost of Collegiate Education," by Pres. Charles F. Thwing, of Western Reserve university.

So far as the misuse of our mother tongue is concerned we are all sinners, some occasional, some habitual. The usual excuse is that it is a slip of the tongue, but whether it is through accident or ignorance we err a careful study of the little book on *Common Errors in Writing and Speaking* by Edward S. Ellis, will be beneficial. To cover the whole field would require a much larger book; therefore he has noted only the usual blunders. Eliminate these from colloquial language and how much pain will be spared the person who does not like to hear his beloved English mutilated. This book would be worth every cent that it cost if there was no more in it than the explanation of the different uses of "sit" and "set," "lay" and "lie," "learn" and "teach," and a half a dozen other words that are constantly misused, but there is much more. Teachers and pupils will find the book of much service. Unlike some books of this character it is well-indexed. (Woollfall Publishing Co., New York.)

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An exceedingly interesting book, both to the teacher and the general reader, is *The Schoolmaster in Comedy and Satire*, one of the latest publications of the American Book Co. It contains humorous, satirical, and entertaining extracts from the works of well known writers. There are biographies and accounts of the principal works of all the authors quoted from. Muzzarelli's New Academic French Course should be examined by teachers and students of that language; the first book in this two-years' course is now out. Explanations of all difficulties are made from the American rather than from the French standpoint. Among books that are being largely introduced in the schools are *Qualitative Chemical Analysis of Inorganic Substances*, Eaton's Business Forms, and Arrowsmith and Whicher's First Latin Readings. The Eclectic English Classics already include works by Irving, Macaulay, Scott, Milton, George Eliot, and Shakespeare.

Most people can probably remember what pleasure it gave them when young to be able to make something. Why not give the boy this pleasure when foot and power machinery for wood and meal work may be obtained of the W. F. & John Barnes Co., Rockford, Ill.; also scroll saws, circular saws, etc.? A catalogue and price list will be sent by mail free.

Prin. W. F. Winsey, of Appleton, Wis., says that Frick's Automatic Electric Program Clock, in use in his school, "is doing perfect work." Any number of programs are automatically given in any number of departments, whether the departments are all in one or a number of buildings. For information address Fred Frick, Waynesboro, Pa.

Poe at one time wrote some very pretty lines on bells in general. He also would have had something very pretty to say of a particular make of bells had he heard the tones of those made by Meneely & Co., West Troy, N. Y. Description and prices will be sent on application.

Silver, Burdett & Co. have just published Robert J. Burdett's *The Modern Temple and Temples*, a history of the great Baptist Temple at Philadelphia, and of its pastor, the Rev. Russell H. Conwell, who, in his varied career, has been a soldier, orator, newspaper correspondent, lawyer, traveler, lecturer, educator, and clergyman.

Among the contents of *The Ladies' Home Journal* during the coming year will be a love story by Bret Harte, short stories by Frank Stockton, a continuation of W. D. Howells' literary autobiography, Dr. Parkhurst's papers for women, Conan Doyle's views of literary America, a discussion, by Margaret Deland, Sarah Orne Jewett and Mrs. Burton Harrison, of the terms "lady" and "woman" and their correct use, music by famous composers, pictures by Kate Greenaway and Palmer Cox, and humor by Eugene Field, Bill Nye, John Hendrick Bangs, and Robert J. Burdette.

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Humphry Ward, art-critic of the London *Times* and editor of an excellent anthology of English verse, will visit this country to deliver a series of lectures on art and artists. It is said that his wife, the novelist, will accompany him.

## A Perfect Cure

Mr. Joel H. Austin is a man very highly esteemed by all who know him. He is now pension attorney at Goshen, Ind., and was for 30 years a Baptist missionary minister. He says: "I suffered years with swelling of my limbs, at times very painful, especially at night. I could not sleep. I have taken six bottles of Hood's Sarsaparilla, and for weeks there has not been any swelling of my feet and limbs. I have also suffered for years with catarrh in the head, which was working down into my



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Zola has communicated to the Paris *Temps* some details as to the scheme of his next work. He wrote: "The subject is to be the three Romes, or rather, he says, the four Romes: Ancient Rome, Rome of the Middle Ages, Papal Rome, and the Rome of to-day. I am particularly anxious for an interview with the Pope, because, 'How can I write a book on Rome without having seen that high personage who dominates the entire policy of the age, and whose rule in the affairs of the world is so little known'? The Pontiff, he says, will be the central figure in this work.

The teacher who begins 1895 with a better position and a higher salary will have a pretty good New Year's present. Now is the time for those who feel certain of their qualifications to go up higher to apply to an agency, like the Bridge Teachers' Agency, 110 Tremont street, Boston, and 211 Wabash avenue, Chicago. One fee registers in both offices.

The youth used to con the text-book to find out what had been done by Newton, Copernicus, Galileo, Linnaeus, and other great scientists. Now it is seen that something more is needed besides text-books. The pupil is set to discovering nature's laws for himself, of course under intelligent guidance. In this work he needs such physical and chemical apparatus, microscopes, telescopes, anatomical models, etc., as are furnished by Alfred L. Robbins Co., 179-181 Lake street, Chicago.

A wonderful stomach corrector—Beechams' Pills.

"The modern steamship," says *The Age of Steel*, "is a huge and complicated machine in which, as a rule, the tools and facilities for repairs are generally overlooked. Break-downs at sea may be more or less serious, but, as a rule, they involve considerable expense, if only in towage or loss of time. In all these cases engineers and machinists, have been embarrassed in making repairs by the want of tools adapted to that kind of work." It is proposed, and in a timely and wise way, that there should be a complete tool equipment for every ocean steamship. This would include a portable drill, a forge, a lathe, and a complete set of hand tools. In any case of ordinary breakage, the trouble could be remedied promptly. The tool-chests of the sea, in these days of merchant marine, would, if equipped as they ought to be, furnish a wide market for the industries concerned in their furnishing.

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